

JOINT FORCE QUARTERLY

JFQ

JV 2020

**Transformation—
An International
Perspective**

**Joint
Experimentation**

**Interwar
Innovation**

**Culmination
Point**

Mission Creep

Summer
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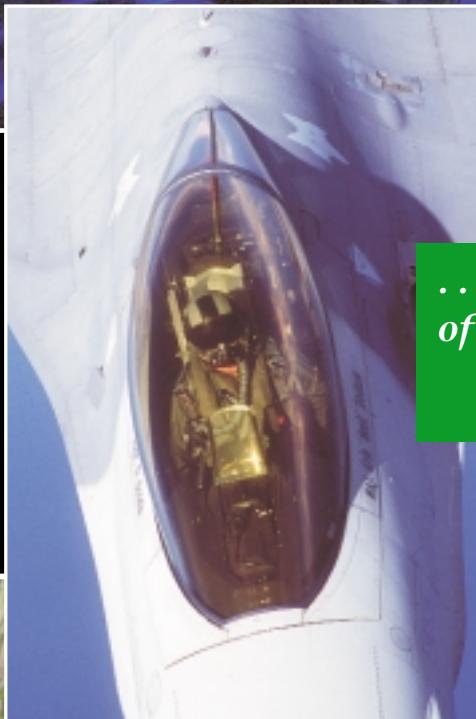
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... the foundation of jointness is the strength of individual service competencies.

—Joint Vision 2020



A Word from the



U.S. Navy (Brook R. Kelsey)

Chairman

Marines approach Blue Beach during Exercise Destined Glory 2000.

In September 2000 the Joint Chiefs of Staff appeared before the Senate and House Armed Services Committees to assess the readiness of the Armed Forces. Readiness will be a key issue in preparing for a new national security strategy and the Quadrennial Defense Review (QDR).

Our short explanation to Congress was that the military is ready, but with important qualifiers. Being ready means having the capability to execute national military strategy, including the mission of fighting and winning two nearly simultaneous major theater wars. Although the Armed Forces can execute current strategy, the dangers associated with the two theater scenario have increased over time. The risk factors for winning the first major war

are moderate, but the lower readiness rates of later deploying forces, combined with shortfalls in strategic lift and critical support forces, result in a high risk for the second. This does not mean that our forces would not prevail in either of the contingencies, but this increased risk translates into longer timelines, loss of tactical advantage, and potential for higher casualties.

Our first-to-fight forces are the most professional, effective, and flexible in the world. Indeed, no other military could have simultaneously accomplished—with the same level of professionalism and competence—high-intensity combat over Serbia, force deterrence and maritime interdiction in the Persian Gulf, and peace operations in both Bosnia and Kosovo. Moreover, training operations in West Africa and fire fighting assistance throughout the Western United States have demonstrated our flexibility to respond across the full spectrum of national requirements.

But such operations have critically stretched the Armed Forces. The post-1997 QDR force, some 40 percent smaller than the one which won Desert Storm, is showing signs of strain. Higher

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The cover of this issue features MH-53J on training mission (U.S. Air Force/David Nolan). The front inside cover shows combat direction center aboard *USS Harry S. Truman* (U.S. Navy/Tina M. Ackerman); UH-60 crew chief in Kosovo (982^d Signal Company/Drew Lockwood); F-16 over South Carolina (U.S. Air Force/Thomas Meneguin); and marine during exercise in the Philippines (U.S. Navy/John F. Valentine). The table of contents depicts Indian soldiers on parade (AP Wide World Photo/Ajit Kumar) and French scout, Joint Resolve XI (1st Combat Camera Squadron/Lisa Zunanyika-Carpenter). The back inside cover captures *USS Normandy* replenishing *USS George Washington* (*USS George Washington*/Brian Fleske). The back cover finds sailor scanning ocean (U.S. Navy/Corey Lewis); marines training at Camp Pendleton (13th Marine Expeditionary Unit, Combat Camera/Branden P. O'Brien); F-16 at Lajes air base in Azores (U.S. Air Force/Michael R. Holzworth); and soldier checking safety zone, Kosovo (55th Signal Company/Tony Vitello).

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A WORD FROM THE CHAIRMAN

(continued from page 1)

than anticipated operational and personnel requirements impose a heavy burden on troops and wear out equipment at a faster rate than anticipated. Moreover, the parts of the military that support the first-to-fight forces—the training base, logistics enablers, and combat multipliers—are not as ready and suffer the consequences as resources are redirected, reprioritized, and consumed to sustain near-term readiness.

The troops are paying the price. They spend more time working on aging equipment at the expense of honing their warfighting skills. Furthermore, support requirements cost much more in each succeeding year in repair costs, down time, and man hours for maintenance.

We arrested the decline in readiness among active units, although significant readiness concerns remain at individual unit level within the services. How was this decline stopped? The answer is largely through welcome additions to the topline of the defense budget over the last few years.

Budget plus-ups have made an important down payment on current readiness, but they can only address critical near-term needs. The last QDR, based on a strategy of shape, respond, and prepare, was designed to meet the projected threats of 2015 and stem the movement of resources from procurement to operations and maintenance. In addition, the review recognized that it was time to increase investment in procurement after a decision in the early 1990s to cut acquisition as a peace dividend. This assessment garnered a general bipartisan consensus. However, it did not anticipate the degree to which the Armed Forces would be engaged in contingency operations, with a deleterious impact on readiness. Indeed, within two years, in response to a downward trend in near-term readiness rates and continued reductions in modernization and infrastructure, the Joint Chiefs testified before Congress that an added \$148 billion was needed to help fix the problem.

What happened? Several factors accounted for the sharp and unexpected drop in readiness. Infrastructure was not reduced (base realignment and closure requests were denied). End-strength reductions had to be deferred because of operating tempo concerns. Operations and support costs grew because of higher fuel costs and sustaining older systems. Unanticipated commitments led to reprogramming scarce dollars. Finally, we had significant unplanned costs associated with new programs such as national missile defense and health programs.

The impact was significant. This was primarily reflected in both manpower and operations and maintenance accounts, which were funded at



Escape and evasion training exercises in San Diego.

Fleet Imaging Center, Pacific (Wayne E. Elliott)

to maintain unsurpassed warfighting capabilities, the Nation must provide the necessary resources

Chiefs and increased the topline in defense spending to help mitigate readiness problems and protect procurement accounts.

But there is another concern that must be addressed: the continued fast pace of operations. This high operating tempo has resulted in equipment aging faster than planned. To reverse this

significantly higher levels (\$10–15 billion a year) than expected. That is the bad news. The good news is that the executive and legislative branches listened to the Joint

trend, we must reduce the average age of equipment by procuring ships, airplanes, tanks, and other systems. Of budget plus-ups in operations and maintenance funds, 75 percent went to increased operations of forces and bases. Only 25 percent went to preserving combat readiness by purchasing spare and repair parts as well as depot level maintenance. Moreover, we invested in next generation systems by increased research and development efforts. But our commitments to these new systems—such as the *Zumwalt* class land attack destroyer, joint strike fighter, F-22 Raptor, and future carrier (CVNX)—will not be realized for several years.

The QDR process in 1997 took the first step toward increasing procurement by establishing the FY01 goal of \$60 billion. This target was intended as a waypoint for increased procurement spending. The simple reality is that having finally reached \$60 billion in procurement for FY01, it is increasingly apparent that it is not sufficient to sustain the force. This amount is not enough to buy the requisite number of ships, aircraft, armored vehicles, and helicopters to sustain the QDR 97 force structure. This is the message that I have conveyed in recent months. We must accelerate the replacement of rapidly deteriorating ships, aircraft, weapons, infrastructure, and essential military systems in order to sustain the force and preserve future readiness.

How much more is required to recapitalize and modernize? This will be a critical issue in the upcoming QDR. To sustain our quality force, maintain unsurpassed warfighting capabilities, and remain engaged in shaping world affairs to support national interests in the future, the Nation must provide the necessary resources. The alternative is a more constrained, higher risk strategy, which in my view is unacceptable for the sole world superpower. Most importantly, we cannot continue to ask the force that emerged after the last QDR to bear the burdens of 21st century commitments.

I am encouraged that we have begun to arrest the decline in readiness. With the support of the President, Congress, and American people, I am confident that the Armed Forces will remain ready for the challenges ahead. Without question, our men and women in uniform must continue to be the best equipped and best cared for military in the world. They deserve nothing less.

HENRY H. SHELTON
Chairman
of the Joint Chiefs of Staff

Letters . . .

JUST-IN-TIME TRAINING

To the Editor—In "Developing Joint Education for the Total Force" (JFQ, Spring 00), John Driscoll points to an area that has long been ignored. He reminds us that the Reserve components are increasingly involved in joint missions and that this is a critical element of the new contract between the Nation and Reservists.

But there are other joint educational initiatives that complement those addressed by Driscoll. Since 1997 the Center for Civil Military Relations (CCMR) at the Naval Postgraduate School has included members of the Army National Guard in its international master's degree program. These students have daily contact with peers from Partnership for Peace countries. In addition, part of the curriculum earns credit for Phase I under the Program for Joint Education. Consistent with difficulties which Driscoll cites, the National Guard has funded development of a distance learning program that has the advantages of bonding with their international counterparts while reducing time spent in residence. This program is being expanded to include students from the Air National Guard beginning January 2001.

This program has led to a new venture in which CCMR will teach pre-deployment, joint, and combined peace operations to total force units rotating to Bosnia. A week-long seminar will offer critical information, including interagency data for the extraordinary challenges facing NATO. Based on this experience, CCMR plans to expand training for both individuals and units deploying to other peace operations missions. These programs directly support the shaping component of national military strategy. They are low cost, high return, and just-in-time education and training. They will make a cost-effective complement to the efforts discussed by Driscoll.

—LTC Jonathan Czarnecki, ARNG
Defense Resource Management
Institute
Naval Postgraduate School

ON DOCTRINE

To the Editor—When General Colin Powell approved the establishment of *Joint Force Quarterly* in 1992, he intended that the journal would inspire debate on joint matters. Thanks to Ronald Dietz for helping to stimulate such a dialogue on two subjects (see Letters, JFQ, Spring 00).

The first is *strategic attack*, defined by Joint Pub 1 as the "direct attack of enemy centers of gravity by air, missile, special operations, and other deep-ranging capabilities" to finesse the fact that all properly conceived campaigns contribute to

achieving strategic aims. This debate is nearly eighty years old, but as Dietz clearly indicates, it is as pertinent as ever. He states that strategic attack is "far more nuanced than the imprecise bludgeoning implied in [my article, "The Plight of Joint Doctrine after Kosovo" in JFQ, Summer 99]. Advanced technology offers unprecedented capability to strike centers of gravity in urban areas with less concern over excessive collateral damage. . . ." Dietz confuses capabilities with utility. Yet he begs the central question just as joint doctrine does: what precisely constitutes strategic centers of gravity that new sensor and shooter systems can strike with such deadly "one bomb for one target" precision? What effects can we predict from striking them?

In the Persian Gulf and Kosovo conflicts, strategic C² targets included leadership bunkers, bridges carrying fiber optic cable networks, monuments and buildings that were national symbols, power grids, and other targets that sustained enemy C⁴I but were also deemed important to morale. Other targets included WMD sites, ground and air forces, and critical industrial facilities. In Desert Storm practically all such targets identified by intelligence sources were struck, often repeatedly, with more sorties than envisioned in the original Instant Thunder concept. Their combined effects failed to win the war and often fell short of the desired effect; for example, the capability of Iraq to control strategic attacks with Scud missiles continued by primitive means (mainly motorcycle couriers).

On the other hand, the synergistic effects of strategic air, missile, and special operations attacks against Iraq were powerful. Though neither the Iraqi leadership nor the Iraqi people were cowed into surrender, or even giving up Kuwait without the ground assault, the ability of Saddam and his generals to understand the situation and control their forces (especially once operations accelerated under coalition ground attack) was seriously degraded. These impacts were crucial to the campaign's rapid success.

Despite a decade of continued advances in the ability of the Armed Forces to accurately see and strike precisely, Kosovo seemed like *déjà vu* all over again. There were attacks on the Serbian leadership, bunkers, air assets, industrial sites, and

power grids—but none of them won the war. Just how much they contributed to success is a matter for debate. But once again a dictator resisted direct assaults on his psyche and leadership capacity.

This doesn't denigrate the extraordinary accomplishments of airmen in the Kosovo conflict, but it does emphasize the need for debate over assumptions that underpin strategic attack doctrine, which infers that attacking enemy will—leaders, population, or both—and the capability of enemy leaders to control their forces and infrastructure—will win wars. This strategy has always seemed possible in theory as well as enticing. But no matter how accurate the weapons, or how crushing and terrifying their effects on civilian populations and infrastructure, popular will is more resistant and enemy leaders more impervious than supposed. The loss of military and industrial assets has a significant impact but on a delayed basis. In fact, the effects of strategic attacks appear somewhat akin to naval blockades—potentially powerful but slow to take effect.

Another outcome of strategic attacks is their link to the other options available to joint force commanders. Experience is clear: strategic attacks in combination with other tools of warfare have been indispensable in every American victory since World War II.

Thus "necessary but not sufficient" best assesses war-winning potential in attacks directed against strategic centers of gravity—not because of the tactical impact of attacking forces but rather the nature of target sets. That this fact disappoints those searching for a silver bullet is understandable, but dangerous if a nation is looking for cheap and easy military options to solve difficult issues.

Another question raised by Dietz involves the impact of casualties on the employment of the military. In asserting that I impugned the contribution of airmen and the "courage of all warriors" he misses a point that troubles many officers—making judgments based on surveys and anecdotal data. The issue is not the courage of soldiers, sailors, marines, or airmen. It is the moral courage of political leaders in the face of changing standards on the use of force. Media frenzies dramatize each casualty to an extent that senior officers are increasingly gun-shy on recommending options that may

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lead to the loss of life. This has nothing to do with airmen who understand joint doctrine and the potential consequences of an exaggerated aversion to casualties in applying that doctrine. In fact, air-power doctrine was the source of concepts that link maneuver and interdiction, concepts indicating the enormous advantages of applying both capabilities synergistically.

No military leader wants to lose lives, and certainly no more than needed to accomplish the mission. But today they must face certain realities: smaller families, erosion of patriotism, the role of the media, and restrictions imposed under international law. Moreover, were cruise missiles the only tactical means of striking Osama bin Laden or the best weapon available in the joint tool box? Did decisionmakers rule out manned aircraft or special

operations capabilities? Must ground forces in the Balkans operate under force protection measures that inhibit the mission?

I do not claim to have definitive answers to these concerns, but I trust that readers of *JFQ* will join in a debate on matters that reside disturbingly close to the heart of the joint doctrine.

—COL Peter F. Herrly, USA (Ret.)
Paris, France

MUTUAL FEARS

To the Editor—In his article “Nuclear Proliferation on the Indian Subcontinent” (*JFQ*, Spring 00), Kenneth Totty argues that domestic policies and a drive for regional hegemony have pushed India to

acquire nuclear weapons and that Pakistan is unlikely to forego a nuclear capability as long as India has one. But I would disagree with his claim that Indian foreign policy is nonaligned and that tensions in South Asia exist because Pakistan is obsessed with its powerful neighbor, India. He states that the average Pakistani thinks India wants to destroy his nation and make it a province, even though annexing territory with millions of Muslims would be against India’s interests.

Are Pakistan’s fears rational? Looking at its relationship with India since independence can be instructive. At partition in 1947, a large fraction of the Indian Army opted to join Pakistan, and the British asked India to provide it with a fair share of arms and ammunition. However, Indian leaders

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blocked the shipment of most of this equipment, and some openly spoke of the need to annul participation. This created a grave sense of insecurity and drove the Pakistanis into alliances with the United States. In later years, India sent its forces into the princely state of Hyderabad, whose ruler did not want to join the federation, and annexed it. This was contrary to the principles India had used to justify accession when Kashmir's Hindu ruler wanted to join the federation while the Muslim population was not given the right to self-determination.

In the wake of India's border war with China in 1962, the United States and Britain rushed large quantities of sophisticated military supplies to New Delhi. Washington asked Islamabad not to use this opportunity to take any action in Kashmir, and Pakistan complied. India used the new equipment to form six mountain divisions to defend itself against a Chinese invasion that Pakistan argued was infeasible to conduct across the Himalayas and inconsistent with Chinese objectives. Several mountain divisions later saw action against Pakistan, and now are deployed in Kashmir to fight insurgents. In an act of hostility, India exploited Pakistan's difficulties in its eastern province in 1971 to dismember the country. Many senior officers in the Indian military wanted to destroy the Pakistani military on the western borders but were prevented by American pressure.

India's strong ties to the former Soviet Union turned its nonalignment policy into a slogan. New Delhi signed a 30-year treaty with Moscow in 1971 and recently renewed it with Russia for another 30 years. India has recently entered into a \$3 billion military agreement with Russia for the joint production and marketing of sophisticated military hardware, including T-90 main battle tanks and SU-30

MKI long-range fighters. Its air force has hundreds of MiG-21 and MiG-27 fighters manufactured under Soviet license. Russia is also providing the aircraft carrier *Admiral Gorshkov* cost free because India is buying MiG-29s to base on it. India is also considering the acquisition and production of nuclear submarines from Russia.

Pakistan is painfully aware that the Indian Strike Corps, equipped with Russian weapons, remains poised to cut Pakistani in two. Prithvi surface-to-surface missiles, deployed with units on the Punjab border, can wreak havoc on Pakistani forces farther north. Nor can Pakistan ignore the political signal contained in the location of India's nuclear weapons test site at Pokhran, less than 100 miles from the border. Thus it is not surprising that Pakistanis live in fear of India.

Unfortunately, nuclear weapons have not improved the security of either Pakistan or India, since both countries live in mortal fear of each other. The greatest threat to many countries can come from an exaggerated sense of insecurity that causes bellicose responses.

Both India and Pakistan would be better off by reducing military expenditures and diverting resources to human development. Spending a billion dollars on an *Agosta*-class submarine or \$40 million on a SU-30 fighter makes it difficult to reduce poverty and illiteracy, bigger threats to long-term security on a subcontinent prone to ethnic, sectarian, religious, and ideological violence.

—Ahmed Faruqui
Danville, California

READY FOR WHAT?

To the Editor—News accounts of unready Army divisions, recruiting shortfalls, and officer retention rates portray a military that is seriously overstretched by a strategy that posits two nearly simultaneous major theater wars (MTWs). Signs of a return to the so-called hollow force—combined with a new administration and another Quadrennial Defense Review—make it expedient to examine strategic assumptions. In "Rethinking Two War Strategies" (*JFQ*, Spring 2000), Michael O'Hanlon makes a good start at it, but he doesn't go far enough in his appreciation of the new world disorder.

O'Hanlon is generally correct in stating that "the notion of two Desert Storms has outlived its usefulness" and inhibits innovation needed for the future. His argument has high-level support. General Wesley Clark, USA, stated "the two-war concept was never a strategy for the employment of forces . . . it was only designed to retain the force structure we already had." Another flag officer depicted the two-MTW construct as "a bayonet thrust into the wall to preserve a force structure that was in free fall." Even during the Cold War, the Nation could not have dealt with an invasion of Western Europe and an attack across the 38th parallel in Korea; fighting two major wars at once was never a reasonable planning standard for a democracy in peacetime.

While providing a sound discussion of the reduced threat to U.S. forces in the Middle East and Korea and a valid rationale for reducing time, effort, and money invested in organizing, training, and equipping troops for such contingencies, O'Hanlon misses the mark in assessing changes that have vastly increased demands for operations at the lower end of the conflict spectrum. Missions variously known as military operations other than war (MOOTW), stability operations, and peace support operations strain forces today and promise to inexorably erode capabilities unless the force structure is reconfigured to better meet the demands of a strategy of engagement and enlargement.

The Army, as the proponent for MOOTW doctrine, conducts "sustained military operations on land to secure the Nation's interests at home and abroad." The Navy and the Air Force will also face changes as the Armed Forces move to a "Desert Storm plus Desert Shield plus Bosnia plus Kosovo plus another peacekeeping mission" force needed to implement national security strategy.

Although O'Hanlon suggests reconfiguring the Army to the extent of "adding a division for a major peace operation," he doesn't go far enough. One peacekeeping division will not suffice to meet even current demands, and requirements are likely to increase. The *three-for-one* rule must be applied to all peace support operations. Maintaining one



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brigade in Bosnia ties up a full division as one brigade is deployed, another trains to replace it, and a third stands down and prepares for future operations. The brigade in Kosovo similarly occupies a full division. There is no sign that either mission will end soon nor that the United States will relinquish its commitment to peace and stability elsewhere in the world. A commitment to peace operations, like conventional war, requires boots on the ground for an extended time.

We should specialize ground forces, creating a heavy corps as a strategic reserve that trains exclusively for high-intensity conflict; a middleweight corps optimized for peace-enforcement like the interim brigades under development at Fort Lewis; and a light corps for strategic deployment, urban warfare, and peacekeeping. Each would fight outnumbered and win—but have specialized doctrine, organization, training, equipment, and mindset for its assigned roles.

One option is pulling America back from its position as the indispensable nation. But the next administration is unlikely to diminish our role in the world. It behooves us to begin making the difficult transition from a Cold War force justified by an outmoded two-war strategy toward the kinds of forces the Nation will need to increase democracy and preserve security.

—MAJ John A. Nagl, USA
U.S. Army Command and General
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To the Editor—“Rethinking Two War Strategies” by Michael O’Hanlon is an informative piece on planning around a two-major-theater-war (MTW) strategy based on North Korea and Iraq. The author proposes an alternative to that construct with a Desert Storm plus Desert Shield plus Bosnia plan. But he omits several key issues. First, as a globally engaged superpower, the United States must be capable of being in two places at once or risk being relegated to the status of a regional power. In switching to any smaller strategy one must visualize the consequences. The Nation will remain a global power for the foreseeable future. But if it does not retain the ability of a superpower with strong budgets and adequate forces, reduced capabilities could subject the Nation to higher risks. And it should be noted that the two-war posture is not a strategy but rather a force planning metric.

A one-MTW plus one-lesser included MTW plus smaller-scale contingency posture is not so undemanding after first glance. Any smaller capability than two-MTWs is not a pat formula for even modest personnel reductions. O’Hanlon declares that a new strategy “would permit a force posture more conducive to executing the types of missions that have recently strained the military.” This assertion is flawed because civilian and military leaders

do not build a force posture to execute specific missions but rather to support U.S. national objectives. Engagement and enlargement and shape, respond, and prepare are our current respective national security and military strategies, not fighting a war in the Persian Gulf and another conflict on the Korean peninsula.

It is operating tempo, aging equipment, and inadequate endstrength—and not a two-MTW construct—that are causing wear on the Armed Forces. It is shortsighted to presume that a strategy focused more on smaller-scale contingencies is a recipe for a reduced endstrength. If the military is strained under current force structure by enforcing no-fly zones and conducting peace operations, a change to a less-than-two-MTW strategy may in fact exacerbate operating tempo, personnel tempo, and the aging equipment problems these tasks bring about. Attempting to save money by planning for the arguably smaller and cheaper wars of today will only exacerbate long-term risks. Forces can and should be sized around current contingencies as well as those envisioned for the future.

O’Hanlon may be correct in saying that something must be sacrificed, assuming the unlikely case that the defense budget will be increased to sustain the current force structure and planned modernization. But under his proposal missions that have caused strains will not go away and neither will the need to modernize and transform, particularly for the Army. It is not surprising that since the last Quadrennial Defense Review, strains on land, sea, and air forces have grown as requirements increased. The Nation will remain globally engaged based on its values of democracy and free trade. Thus its military must have the capability to respond to any conflict, from major theater wars to humanitarian assistance. General Shinseki’s vision for transforming the Army ensures this capability. Transformation is more than new equipment, it is a process that includes training, doctrine, and leadership development.

“The alternative is attempting to prevail in simultaneous worst-case scenarios in the Persian Gulf and Korea,” according to O’Hanlon, “at the expense of readiness, research, and preparing for the future.” It defies rational thought to presume the Armed Forces are prepared if they are unable to perform core warfighting missions. A force that is ready to fight two nearly simultaneous wars is by definition ready to patrol streets in Kosovo or Bosnia, while the opposite can hardly be said.

The next QDR will be more than a document or strategy alternative; it is a critical process whose outcome will be vital to transforming the Army. Regardless of which strategy is proposed, land forces

will remain indispensable. The two-MTW posture may remain useful to hedge against uncertain threats and probable conflicts. If done correctly, the QDR process can identify the range of missions the Armed Forces are likely to confront. The focus should not be on predicting major theater wars of the future or savings that can be made in endstrength, but on maintaining the role of the United States as the only superpower under any force construct.

—LTG Theodore G. Stroup, Jr., USA (Ret.)
Association of the United States Army

To the Editor—Your recent article by Michael O’Hanlon resurrected many ideas that have been under discussion at the U.S. Army War College. The author is accurate in pointing out that the possibility of two major theater wars (MTWs) still exists. Preparing for one war is an invitation to having something nasty arise elsewhere, and the United States is the only power able to stabilize through deterrence by virtue of its massive power. The larger problem, as he argues under “Something Has to Give,” is that even a two-MTW force sizing matrix is not adequate for existing or projected requirements. In that respect, the DS-DS-+Bosnia formula has merit but still does not do what is needed.

In one sense, the real issue is readiness to do many things and the artificiality of attempting to maintain everyone at C-1 all the time. The hard cold fact is that the Army is an expeditionary force—as defined by Joint Pub 1 if nothing else. Given that, the real requirement is to accept it as fact and adapt to the requirements that flow from it. Real expeditionary forces operate on long wave cycles compared to present operations. This requires a very different infrastructure management system and institutional flexibility that will be difficult to adopt.

The Marine Corps and Navy have operated as expeditionary forces for a long time. Their entire organizations are focused on a cycle that creates, trains, deploys, employs, and recovers. This system hits Army War College students in the face every March during the Strategic Crisis Exercise as student regional CINCs holler for more carriers, then gradually learn that some of them are in the service life extension program and will not be available for months! This is not another case of *USS Yorktown* returning from the Coral Sea and going through super-accelerated refit for Midway. This five-phase system would be new to the Army but would allow it to tackle present and future obligations with less strain on the force and better use of available resources.

O’Hanlon’s DS-DS-+Bosnia formula will, by his calculations, net a 5–10 percent reduction in active forces and he argues that allies should be added into any equation. The difficulty is that the United States will not always operate with allies. It

is just as likely that the Armed Forces may be operating with coalition partners with which they have little in common. As an expeditionary force, the Army might require more people, who can be afforded, but only if Congress and the American public are convinced that the increase is connected to a serious reconfiguration that will provide a significantly better cost-benefit ratio.

Adopting an expeditionary mentality and infrastructure to support it would allow the force to always have units ready for major war or various contingencies. Some would be trained for one and some for another. Overexpansion will certainly be needed in low-density/high-demand units, but the

fact is that most current missions—even those resembling police actions—can't be executed by military police units without tactical combat savvy and tanks, artillery, and air support—in other words, unless they are combat units. Thus creating unique mission units is not a productive use of assets. The basic elements of all missions continue to rest on disciplined, combat-trained forces. The British experience in Northern Ireland provides evidence that combat units can perform such tasks and recover without damage once the purposes of retraining are understood.

A 200,000-strong expeditionary force suggested by O'Hanlon is reasonable given current and

projected capabilities to move it strategically. Other assets would be needed to rapidly augment this force if necessary. Though many imponderables remain, the proposition that rapid response is important goes back at least to Instant Ready Force, which General Douglas MacArthur originated as Chief of Staff of the Army in the 1930s. If we could get a high-lethality brigade on the ground in any region within 96 hours, it could go a long way toward reducing the need for 500,000 troops in six months. The calculus is problematic and situation-dependent, but the argument seems sound.

—COL Douglas V. Johnson, USA (Ret.)
U.S. Army War College

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Transformation— An International Perspective

Transformation is often considered in terms of a revolution in military affairs—the new doctrine, organization, and technology that may change the nature of warfare. But such a revolution is just one aspect of broader global trends. National militaries in many countries are being restructured to engage the realities of the 21st century. This JFQ Forum looks at seven countries in different regions of the world to illuminate the modes of transformation that are currently underway with all their inherent promises and risks.

The militaries surveyed represent countries of strategic interest to the United States and also reflect many facets of instituting change and the challenges posed by transformation. China, India, and France have experienced militaries that are seeking to enhance their regional capabilities while responding to technological advances, fiscal constraints, and uncertainty on the international scene. Indonesia and South Africa are cases of nations that are reshaping militaries in the face of profound political, social, and economic change. And Poland and Colombia epitomize disparate nations that have undertaken a significant restructuring in the area of civil-military relations.

Collectively, these articles suggest the monumental and expanding scope of transformation as an international phenomenon. For professional officers the implications of this process are important. They reveal both the range of factors influencing military effectiveness as well as diverse perspectives on the shift of power in defense establishments. Moreover, the articles suggest that the United States must be increasingly sophisticated when engaging militarily with a range of countries around the world. Finally, the articles call for a reappraisal of the revolution in military affairs and the strategic consequences of military transformation. JFQ

The People's Liberation Army

PLA training along China's coast.



AP/Wide World Photos (Xinhua)

Looks to the Future

By CHARLES F. HAWKINS

Western analysts have long known that Beijing is modernizing its armed forces; indeed the People's Liberation Army (PLA) is undergoing a transformation. Through innovation in doctrine, organization, and technology—the fundamental ingredients of a so-called revolution in military affairs (RMA)—China is pursuing a capability to allow “the inferior

to defeat the superior” with an eye fixed on the year 2030. This is an ambitious effort to undertake but by no means unachievable.

With the possible exception of the United States, China has analyzed the implications of RMA more than any other nation. Although the impact of modern weaponry was predicted by the Soviet Union in the mid-1980s, the wake-up call for the People's Liberation Army came with the Persian Gulf War. Stunned by the near dominance of American systems, which bested Soviet and Chinese equipment in the air and

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on the ground, the Chinese scrambled to understand what had happened.

In fact, Chinese analysts have been investigating high-tech warfare since the early 1980s as the Falklands, Becca Valley, and air strikes on Libya stimulated their interest. But their efforts did not gain support from the central government until more recently. China relearned the lessons of Desert Storm in the Taiwan Strait during 1996 when its forces did not perform well in bad weather, and U.S. naval forces operated at considerably longer distances with greater real-time data and effective military power. With the realization that they lagged at least a generation behind technologically, Beijing redoubled its efforts. Then, in 1999, NATO launched air strikes against Serbia which once more demonstrated the gap between China and the West.

American technology motivates Chinese research. Historical analysis, policy issues, and operations research, though important, are only of secondary interest.

Word and Deed

The Chinese make a distinction between a revolution in military affairs and a military revolution. They regard the former as a process that can be managed—and see America as somehow guiding the ongoing process well. The latter will come about when the RMA process is mature, perhaps in 15 to 30 years. It will be the revolution that actually changes the established order. Precision guided munitions and information dominance notwithstanding, China is preparing for this future. But it can't prepare everywhere or in all things equally. PLA thinking calls for picking its developmental challenges carefully and concentrating efforts prudently.

To meet this daunting task, Chinese analysts are gathering data from all available sources in the West. They feel the effort can't be focused until all possibilities are uncovered and understood. The effort is dynamic. Individual researchers focus on an array of topics.

People's Republic of China

Defense Budget: Estimated at \$14.5 billion for 2000; the gross domestic product in 1999 was \$732 billion (\$4,000 per capita).

Manpower: China, a nation of 1,255,000,000, has a total of 168,483,000 men between 18 and 32 years of age. Combined active and reserve strength is estimated at 3,070,000. Terms of service are two years, selective conscription. Active forces include some 1,000,000 conscripts and 136,000 women; reserve forces may total as many as 600,000 members (all services).

Armed Forces: The People's Liberation Army (PLA) includes five components (estimated active strength): ministry of defense staff/centrally-controlled units (130,000, not included elsewhere), strategic defense forces (100,000-plus), ground forces (1,700,000 soldiers) with some 7,060 main battle and 700 light tanks, naval forces (220,000 sailors) with 65 submarines (including 1 nuclear-powered ballistic-missile boat) and 60 principal surface combatants, 368 patrol/coastal craft, and 39 mine warfare vessels; some 5,000 marines; naval air with 25,000 personnel and 507 shore-based combat aircraft, and air forces with 420,000 members and over 3,000 combat aircraft.

Paramilitary Formations: People's Armed Police (1,100,000 members of internal security, border defense, guards, and other organizations).

Source: International Institute for Strategic Studies, *The Military Balance, 2000–2001* (Oxford: Oxford University Press for the International Institute for Strategic Studies, 2000).



Parade marking PLA founding.

Various American futurologists and strategists have influenced Chinese thinking on military affairs, according to Captain Zhang Zhaozhong. A member of the Naval Research Center, he cites the Tofflers, William Owens, and Martin Libicki, and says that the push of information technology on RMA has forced the PLA navy to accept that concepts drive platform decisions rather than the reverse. Zhang recognizes the "advantages and disadvantages of using commercial off the shelf technology." Its use promotes interoperability, he indicated, but "may make it easier for an enemy to exploit an opponent's systems."

First hand experience is also studied to explain the interaction between advanced weaponry and low tech procedures. The shootdown of an F-117 stealth fighter over Serbia during Operation Allied Force was examined by Shi Peixin. His explanation of the trap, using successive radar sets, short activation times, and communications linkage and processing at the final

Many are technological and others are more theoretical, while still others look at the impact of change on the People's Liberation Army and operational capabilities. In short their research extends to technology, doctrine, and organization, with a view to how these three areas will affect operational output.

SAM launch site, was both insightful and mathematically lucid.

Huang Haiyuang, a senior researcher who has traveled widely in the West, summarized seven PLA technological priorities:

- information operations and warfare
- air and missile technology
- precision guided munitions
- defensive weapon technology
- unmanned aerial vehicle technology
- military space technology
- naval carrier (air-to-ship integration).

Huang explained that the People's Liberation Army has embarked on a two-phased plan to scale down into a smaller, higher quality force while exploring new concepts and then to

the People's Liberation Army has embarked on a two-phased plan to scale down and focus on high technology applications

focus on high technology applications. The first phase is well along, though he added a concluding caution: "the individual is still the key in fast-paced warfare."

Emerging Capabilities

The Chinese are trying to catch up in a military competition that they know can't be won under ordinary circumstances. They are attempting to achieve extraordinary advantages with a few niche capabilities while treading water elsewhere. Can the People's Liberation Army accomplish stovepipe breakthroughs in key areas while maintaining others at minimal levels of acceptable performance? It remains to be seen, but the West should not discount such an effort.

Indeed, in some areas the Chinese have demonstrated exceptional advances. Missiles and artillery are their strong suit, as one American military colleague observed. After touring the country in 1996 and seeing firepower demonstrations and intercepts by surface-to-air missiles, he concluded, "the rest of the PLA's conventional forces are about where we were in the 1930s." The state of their rocket forces, however, suggests that this might not be

cause for complacency. China has leapfrogged past competitors before.

Chinese missile development owes much to Tsien Hsue-shen, a native born scientist who studied in the United States at CalTech and MIT, helped found the Jet Propulsion Laboratory, and worked on classified projects during World War II. On the eve of becoming an American citizen, Tsien got caught up in the Cold War hysteria of McCarthyism. Rejected by the nation he sought to adopt, he returned to China and became the undisputed father of its missile program.

Tsien's expertise was recently merged with an emphasis on computer technology. When the impact of the

Cultural Revolution wore off in the early 1980s, Beijing turned to the burgeoning computer market. Convinced that other countries such as the United States, Japan, and Singapore held an unsurpassable lead in hardware, China emphasized software development and hasn't been disappointed. For example, in the late 1990s Chinese military analysts and systems engineers took an unclassified tour of a suite of simulations at a federally funded research and development center in the United States. This past year it was reported that a similar suite had been

built in Beijing: "It wasn't the equal of ours, but it was very impressive by any standard. And they did it in a year."

Although technology is highly important, it isn't the only thing that occupies PLA planners. They need something to bridge the gap between today and their vision of 2030. That something is found in the domain of doctrine and organization.

Landpower. Over the past 15 years there has been significant change in the way PLA forces operate in the field. Before rapprochement with the Soviet Union in the 1980s, its forces on the northern frontier altered their defensive posture from forward deployed to arrayed in depth and were thus better able to absorb and defeat a Soviet offensive before it could reach the industrial area around Beijing. Making this doctrinal shift came not from advanced technology but from doubling ground transportation assets in frontline divisions. Increased battlefield mobility was key and has become the new cornerstone of land operations.

Seapower. The PLA navy has been reinventing itself since the early 1980s. Of the navies in Asia, it has the most manpower with an afloat tonnage and number of combatant ships rivaled only by Japan, with India and Taiwan a distant third and fourth. In the decade before 1993, China increased



AP/WideWorld Photos/Xinhua



its surface combatant ships by a factor of two and its mine warfare and support vessels by a factor of six, for the highest afloat-support ratio in Asia.

change has enabled the PLA navy to alter its maritime strategy from coastal defense to limited power projection

During the same period amphibious lift capacity stagnated and the number of submarines fell by half.

The afloat support ratio has great significance. At .63 front line support vessels to every principal surface combatant, it is three times greater than Australia, the nearest regional competitor. A high afloat support ratio indicates a capability to conduct long-term, long-range operations. And a level of .20 or better signifies good sustainability while .10 or less is poor.

Since the mid-1990s the Chinese have concentrated on amphibious lift. Organizational changes, although beneficiaries of technology, were not predicated on it. They

would have happened in any event, and change has enabled the PLA navy to alter its maritime strategy from coastal defense to limited power projection and sustainability.

China has eschewed an aircraft carrier capability. Although it would be a source of national pride, such a costly platform is something it chooses to defer. PLA would be hopelessly out-classed by the United States for the foreseeable future and, given increasingly sophisticated unmanned aerial vehicles, future carriers may be quite different. Furthermore, the immediate areas of interest are the littorals, and the East and South China Seas—areas where operations can be facilitated by land-based aircraft and missiles.

Airpower. We have also seen changes in the air and airborne forces, notably the ability to transport troops rapidly anywhere within national borders. In addition to establishing a division-sized rapid reaction force, other army units have conducted brigade-sized experiments in high-tech warfare.

Current and Future Concepts

The main difference between approaches to warfare is that the United States tends to focus on systems and processes while China keys on objects, or the *object-space of war*. Americans believe they will dominate any object-space in battle if they get the processes right and employ the better systems. But Chinese theorists focus on the object first and use that knowledge to define the systems and processes to achieve success. As a superpower we have the luxury of affording our approach; for efficiency they have no choice but to follow theirs.

Senior Colonel Chen Bojiang studied for a year in the School of Diplomacy at Georgetown University on a Ford Foundation grant. He has published two books since returning to his post at the Academy of Military Sciences in June 1998, both researched during his American stay. These have made him a celebrity in Chinese military circles.

One of Chen's themes is research on high-tech warfare, which he notes has the "feature of variety." He claims that of its patterns "warfare has reached a new phase, namely, forming a cubic warfare with land, sea, air, and space closely combined." Together with the electromagnetic spectrum, these are the object-space to be dominated. Loosely defined, cubic warfare might be seen as the rationale for Chinese joint operations.

Chen's analysis, like that of many of his fellow analysts, often turns to information warfare and operations: "High-tech warfare has the feature of information confrontation." The command, control, and intelligence system "is the prerequisite not only for hard weapons to play a role, but it is also the target first attacked by the opposing side in war. The main [feature] is pluralistic confrontation, including the acquirement and anti-acquirement, control and anti-control, as well as usage and anti-usage of information."

Although this may not be regarded as particularly earthshaking, Chen's analysis leads him to insights into how the People's Liberation Army may conduct itself in the future. Citing the three warfares—mobile, positional, and guerrilla—Chen has asked rhetorically: Should high-tech warfare operations be protracted or quick? The answer seems obvious to many in the West. Not necessarily in China, however.

A great historic strength has been a large landmass. Combined with a vast population from which to draw fighters, that has meant China can conduct protracted wars—mobile, positional, or guerrilla. The ultimate successful protracted conflict is the absorption over many generations of an

initially victorious invading army. Chen believes this is no longer the case. No enemy would "let themselves so easily be involved in a protracted war with China," though China might be defeated, because of the excessive cost of campaigning. Moreover, given overall Chinese strategy, "It is also unacceptable to have a protracted war. Under the conditions of new history, the main task of the country is to carry out the economic construction . . . military actions must be [quickly accomplished in] scope and time." Chen wraps up the argument stating that "attack as the main resort has an extraordinary importance on the high-tech battlefield."

Another survey of future warfighting concepts appeared in 1998. *Unrestricted Warfare* by Senior Colonels Qiao Liang and Wang Xiangsui is widely read in military circles within China and has attracted attention in the West for urging multiple means—military and nonmilitary—to strike the United States. Hacking into Web sites, targeting financial institutions, committing terrorist acts, using the media, and conducting urban warfare are among the methods proposed.

In an interview that appeared in June 1999 in *Zhongguo Qingnian Bao*, a daily newspaper published by the Communist Party Youth League, Qiao noted "the first rule of unrestricted warfare is that there are no rules, with nothing forbidden." He argues that "strong countries make the rules while rising ones break them and exploit loopholes. . . . The United States breaks [U.N. rules] and makes new ones when these rules don't suit . . . but it has to observe its own rules or the whole world will not trust it."

Questioned about *Unrestricted Warfare*, other PLA officers were quick to point out that its ideas had no official status and did not represent the doctrine of either the military or government. A pat answer or indicative of divided thinking inside the People's Liberation Army? Perhaps both.

Qiao and Wang have written that "one war changed the world," and rightly or wrongly that technology is found at the heart of that change. As proof they indicate that "it is only necessary to cite the former Soviet Union,

the Balkans, cloning, Microsoft, hackers, the Internet, the euro, the Asian financial crisis, as well as the world's final and only superpower—the United States. These are sufficient. They pretty much constitute the main subjects on this planet for the past decade."

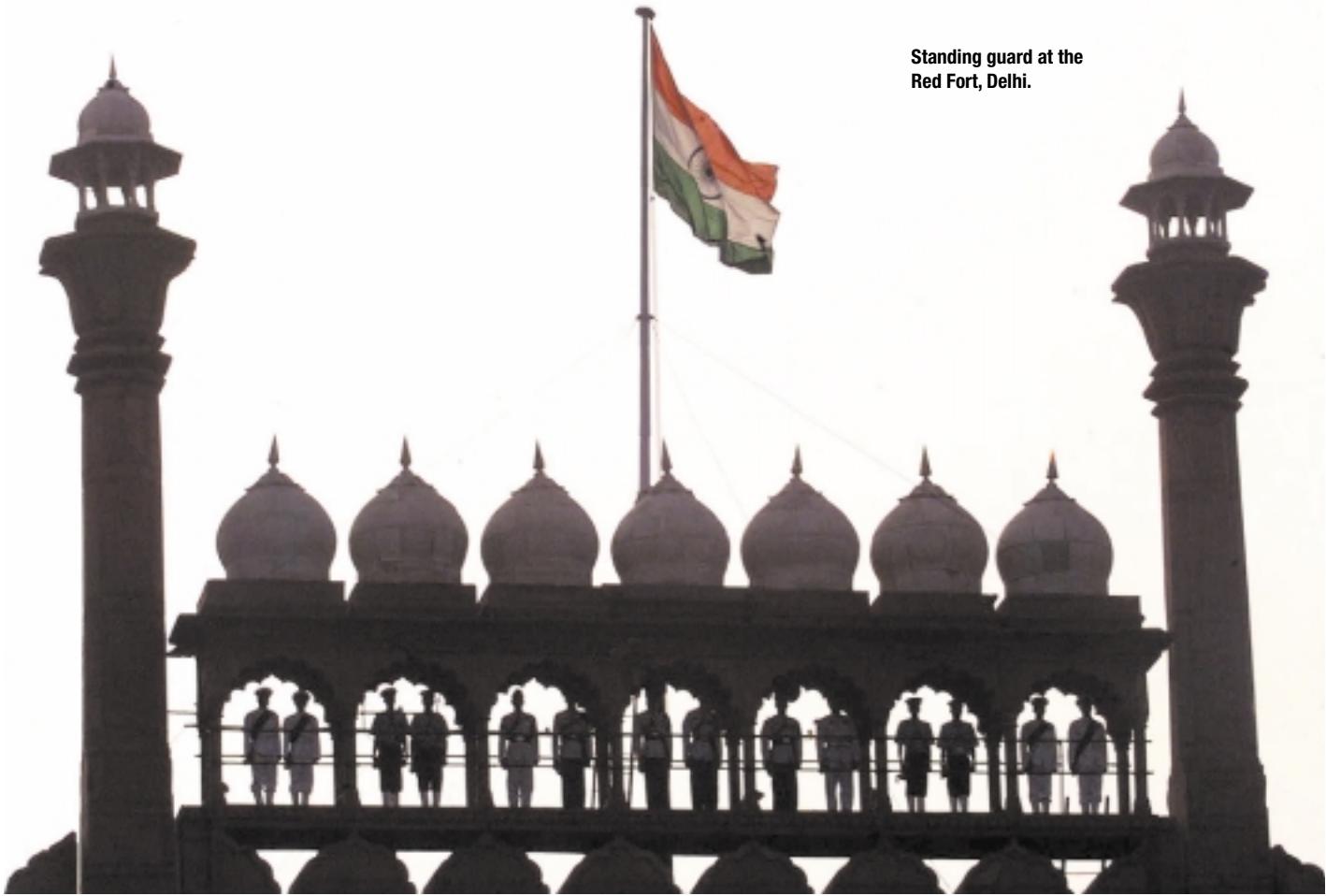
One should not be surprised that some analysts try to understand and explain the success of American military technology in their own terms. Nor is it amazing that lacking the wherewithal to compete technologically in the near term these analysts would propose alternate views on doctrine and organization to counter a potential U.S. threat. But there is a caution. Some Chinese defense analysts also are guilty of altering the evidence and making selective use of data to suit themselves or the Communist Party. Some interpretations are so patently flawed that one wonders if rhetorical analysis has reached a new plane. This is all the more reason to insist on transparency in peacetime interaction.

JFQ

Research on this article was facilitated by the author's contacts with Chinese defense analysts over the last decade. In recent years he has both lectured at the China Defense Science, Technology, and Information Center and co-hosted the Sino-U.S. Military Development's Workshop in Beijing.

Standing guard at the Red Fort, Delhi.

AP/Wide World Photos



MODERNIZING the Indian Armed Forces

By TIMOTHY D. HOYT

India appears to have embarked on a major military modernization effort. In 1998 it electrified the world by detonating three nuclear devices in the Rajasthan desert, followed by two more tests. Less than a year later it launched a solid-fuel, mobile, medium-range ballistic missile, the Agni-2, with an estimated range of 2,500 kilometers. In August 1999, in the heat of domestic elections, it drafted nuclear doctrine calling for an

assured nuclear retaliatory capability and a triad of land, sea, and air-based weapons.

The budget for 1999–2000 significantly increased funds for space and nuclear related activities. And the budget for 1999–2000, reflecting the Kargil crisis in Summer 1999, called for an increase of 28 percent in defense outlays. India has announced the purchase of new frigates, submarines, and perhaps an aging Russian aircraft carrier as well as Mirage-2000 and Su-30 strike aircraft and most recently the acquisition of new T-90 tanks.

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Siachen Glacier base camp.



AP/Wide World Photos

The State of the Force

The Indian defense establishment is among the largest in the world, numbering over 1.2 million personnel. The army is the predominant service in terms of prestige and resources. Its share of the 1999–2000 budget was 55.29 percent compared to 14.8 percent for the navy, 22.49 percent for the air force, 6.07 percent for research and development, and 1.35 percent for defense production. Although India is often portrayed as militarily passive—reacting to the acquisition by Pakistan of high technology or advanced systems—this is not the case. Its nuclear capability has been under development since the mid-1940s, and procurement in 1990 indicated that New Delhi initiated acquisition of almost every category of weaponry. Because Islamabad is unable to procure modern arms as a result of U.S. sanctions and its own economic situation, India can be expected to maintain the initiative in obtaining new weapons and technology and to retain a substantial conventional advantage.

Army. Although it has shrunk by 120,000 men since 1990, India still has over a million soldiers under arms. The army is organized around regional commands (North, West, Central, South, and East). It has separate divisional structures to manage threats

from China and Pakistan, the former with nine mountain divisions and the latter with three armored and four rapid (partially mechanized) infantry divisions (up from two armored and one mechanized). Nineteen infantry divisions, fifteen independent brigades, and other support units round out the current army structure.

As supporters of the Indian military have pointed out, this posture

ambitious plans for out-of-area intervention capabilities cannot be achieved at current spending levels

commits over half of the allotted budget to fighting a conventional war against Pakistan most do not believe will occur. The heavy divisions committed to the Pakistani frontier—ill-trained for counterinsurgency operations, poorly equipped for peacekeeping, and too heavy to lift elsewhere—cannot be easily used for other purposes, either to engage China or for out-of-area operations. Pakistan's deployment of nuclear weapons reduces the likelihood of mid-to-high intensity armored conflict of significant duration; the risks of escalation are simply too great.

The army has experienced a shortfall in officers over the last decade and the low quality of recruits is also a concern. Though the portion of the army budget dedicated to payroll and benefits continues to grow, the relative benefits for company and battalion-level officers fell 60–70 percent between 1947 and 1982, spurring an exodus of mid-level officers. Slow promotion rates and the relatively mature age of mid-level officers further complicate this personnel problem.

Stores and stockpiles were run down in the 1990s, a period of relative austerity and limited growth in the defense budget. New equipment has been purchased in response to the Kargil conflict. While artillery fire control radars and mountain gear are at the top of the priority list, the big ticket item is the T-90 tank.

Navy. The 1980s marked a high point for the navy in terms of recognition abroad and prestige at home. Acquisition included lease of a Soviet *Charlie-I* class submarine, purchase of former *HMS Hermes* (renamed *Viraat*) to provide a second carrier, and fleet expansion from 32 principal combatants to 44 ships.

Today the navy seems to be on the verge of halting a decade-long decline. The carrier fleet has fallen to one with the decommissioning of *Vikrant*, and the number of frigates and destroyers has declined to 20. Ambitious plans in the late 1980s for out-of-area intervention capabilities and three carrier task forces cannot be achieved at current spending levels, and indigenous shipbuilding programs have been plagued by long delays and technical problems.

Nevertheless the service demonstrated significant regional lift capabilities by intervening in the Maldives and Sri Lanka during the late 1980s. It continues to show the flag outside the region, including a recent visit by the jump-deck carrier *Viraat* to the Persian Gulf and planned exercises in the South China Sea. The navy has sufficient forces to assert sea control in a short conflict with Pakistan, but it lacks air cover—particularly early warning—and would be at risk in operations too close to the Pakistani coast.

Other acknowledged shortfalls include lack of reconnaissance aircraft, poor sensors, and insufficient standoff missiles. The large submarine force, however, provides a sea denial capability.

Air Force. The absence of an advanced trainer, aging equipment (particularly obsolescence in the MiG-21 force), and rigorous flight schedules have led to a high rate of accidents. Efforts to procure an advanced jet trainer have been stalled for over a decade. The quality of pilots remains quite high, as demonstrated in the Kargil conflict when units flew difficult strike missions at almost 18,000 feet against

entrenched forces. More serious problems include declining numbers of pilots and insufficient funding for operations and maintenance.

Also lacking are critical force-multiplying capabilities such as airborne warning and control systems, mid-flight refueling, advanced electronic warfare, and sophisticated night-strike assets. While Indian analysts paid close attention to the performance of airpower in the Persian Gulf War, the air force will require substantial increases in funding to meet expectations.

Efforts to increase air force capabilities include upgrading MiG-21s with Russian assistance (two years behind schedule), production of a light

combat aircraft (ten years behind initial plans), and the acquisition and licensed manufacture of Russian Su-30MKIs (with some delivered behind schedule and significant delays in setting up production). In the meantime, India will rely on older MiG-21 airframes and probably lose aircraft at an annual accident rate of 20–25 planes per year.

Strategic Forces. Nuclear tests and draft nuclear doctrine demonstrate an intention to field some form of nuclear deterrent and operational strategic forces. The draft nuclear doctrine does not explicitly rule out tactical nuclear weapons despite adherence to a no-first-use policy, and some analysts have raised the tactical nuclear option. India currently has sufficient weapons-grade plutonium for roughly sixty weapons. With much larger stocks of reactor-grade plutonium (which is less efficient material for weapons design), the number of weapons could increase to 750–1,000. Tests of thermonuclear, fission, and sub-kiloton devices have reportedly included a reactor-grade plutonium design, with some analysts calling for testing both thermonuclear devices and neutron bomb technology. India has recently tested the 2,500-kilometer ranged solid-fuel Agni-2 mobile missile, continues to deploy and test land and sea-launched versions of the tactical Prithvi missile, and pursues submarine-launched cruise and ballistic missile options.

Whither Transformation?

Though Indian forces have begun integrating some new capabilities, including increased use and production of unmanned aerial vehicles, it is unclear that they have either the inclination or requirement for significant levels of innovation. Most threats are adequately and less expensively managed through a manpower intensive force than through high technology. Like many militaries, the Indian armed forces are emphasizing computer literacy, but they are having great difficulty in recruiting, promoting, and retaining technicians with revolution in military affairs (RMA) related skills.

Growth in Active Paramilitary Strength, 1990–2000

Organization	1990	2000
State Armed Police (formerly known as Provincial Armed Constabulary)	250,000	400,000
Border Security Force (under Ministry of Home Affairs)	90,000	174,000
Central Reserve Police Force (performs internal security role; under Ministry of Home Affairs)	90,000	160,000
Central Industrial Security Force (guards private sector locations; under Ministry of Home Affairs)	70,000	88,600
Railway Protection Forces	70,000	70,000
Assam Rifles (performs security duties within northeastern states; under Ministry of Home Affairs)	40,000	52,000
Rashtriya Rifles (under Ministry of Defence)	—	36,000
Defence Security Force (provides security at Ministry of Defence installations and facilities)	30,000	31,000
Indo-Tibetan Border Police (under Ministry of Home Affairs)	14,000	30,000
Special Frontier Force (mainly ethnic Tibetans; under Cabinet Secretariat)	8,000	9,000
Coast Guard	2,500	8,000
National Security Guards (anti-terrorism contingency deployment force; comprising elements of the armed forces, Central Reserve Police Force, and Border Security Force; under Cabinet Secretariat)	5,000	7,400
Special Protection Group (VIP protection)	—	3,000

Source: International Institute for Strategic Studies, *The Military Balance, 1990–1991* (London: Brassey's, 1989); *The Military Balance, 2000–2001* (Oxford: Oxford University Press for the International Institute for Strategic Studies, 2000).

Republic of India

Defense Budget: Estimated at \$15.9 billion for 2000; the gross domestic product in 1999 was \$440 billion (\$1,800 per capita).

Manpower: With a population of 1,016,242,000, India has a total of 136,290,000 men between 18 and 32 years of age. Active military strength is 1,303,000. Reserve forces number 535,000—army, 300,000; territorial army (volunteers), 40,000; navy, 55,000; and air force, 140,000.

Armed Forces: India has an army of 1,100,000 soldiers and some 3,414 main battle and 90 light tanks, a navy with 53,000 sailors and 16 submarines, 26 principal surface combatants, 38 patrol/coastal craft, 17 mine warfare vessels, a force of 1,200 marines, and naval aviation with 5,000 personnel and 37 combat aircraft; and an air force with 50,000 members and 774 combat aircraft.

Paramilitary Formations: A total of 1,069,000 personnel serving in various police, security, and special units (see figure on page 19 for strength of active paramilitary formations).

Source: International Institute for Strategic Studies, *The Military Balance, 2000–2001* (Oxford: Oxford University Press for the International Institute for Strategic Studies, 2000).



Future Threats

India faces threats on several fronts: internal separatist insurrections and acts of terrorism, Pakistan, China, and a maritime or extra-regional threat.

The internal threat has diminished since 1990 but remains the primary security concern for the near term. The resolution of the bloody revolt in Punjab ends a major danger to stability. But the Kashmir insurgency continues. The northeast remains restive, and though ethnic conflict rages in Sri Lanka there will be concerns about the Tamils.

The significance of the internal security threat is revealed by the increase in paramilitary forces, which have grown substantially since 1989–90 (to include creating at least two special units to protect VIPs and to supplement counterinsurgency forces). This increase is greater than reported declines in army strength, suggesting that internal security threats demand more than reassigning personnel from one service to another. Evidently, despite positive movement in Punjab and the northeast, internal security is a resource drain.

Although Pakistan is perceived by India as a threat, its capability has changed in scope and complexity. A decade of poor economic performance and the U.S. arms embargo have degraded the army and air force. While the army has been expanded by five infantry divisions, manpower has increased by only 40,000. Most of the 2,320 tanks are obsolescent, with the exception of 300 modern T-80UDs, and mechanized forces have older M-113 armored personnel carriers. Heavy forces appear incapable of sustaining offensive action. Moreover, the army lacks adequate medium altitude air defense systems and helicopters and has experienced difficulty in acquiring equipment from any source. The air force relies on aging Mirage III and V variants, Chinese models of older Soviet

The most important change in national security has been the election of two consecutive coalition governments led by the Bharatiya Janata Party (BJP)—the only party focused on national security issues, including nuclear deployment. The party promised to undertake a strategic defense review, establish a working national security council, and make other structural reforms to improve the decisionmaking process.

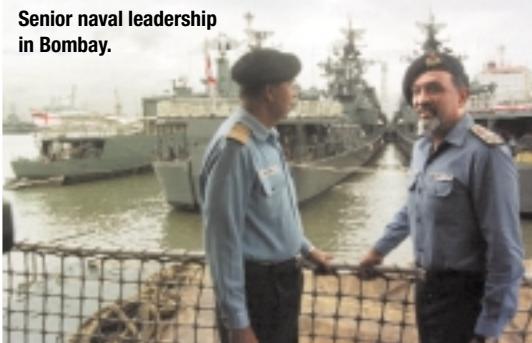
Thus far the result of these efforts is mixed. The relative influence of the national security advisor, which is considered critical to reform, is unclear. Brajesh Mishra holds the portfolio, but Arun Singh, a veteran of the Rajiv Gandhi administration and one of the foremost security experts in the country, has been appointed the national security advisor to the foreign minister. The Kargil review committee report suggested that the national security council is not as yet an important factor in the decisionmaking

process. Singh is also in charge of one of the four committees that reviews intelligence policy—another recommendation of the report.

Since independence, India has demonstrated the near-absolute primacy of civilian authority over the military. BJP came to power advocating reform in national security, including assuring greater military input in decisionmaking. In a demonstration of this new atmosphere, the defense minister's committee—composed of the minister and service chiefs—actually met. The fact that it had not been convened for twenty years suggests how little military influence exists in the national security process. The minimal suggestions of the Arun Singh Commission in 1990, which included devolving powers to theater commanders so service chiefs can engage in more long-term planning, have not been implemented; and many recommendations have not been publicly released.

AP/Wide World Photos (Ajaz Rahi)

Senior naval leadership in Bombay.



AP/Wide World Photos (Sherwin Orasco)



Patrolling forward area of Siachen Glacier.

AP/Wide World Photos (Ajit Kumar)

MiGs, and a few F-16A Falcons delivered in the 1980s. Any qualitative edge Pakistan might once have enjoyed over

the real threat posed by Pakistan has shifted to the two extremes on the conflict spectrum

India is gone, except perhaps in subsystems and electronic warfare components. The navy is worse off, though it maintains a significant force of French *Agosta* and *Daphne*-class submarines and anti-ship missile capabilities with U.S.-supplied Harpoons.

The real threat posed by Pakistan has shifted from mid-intensity conventional warfare to the two extremes on the conflict spectrum—nuclear capability and low-intensity conflict and terrorism. Pakistan has fissile stocks estimated as sufficient for thirty nuclear

weapons, in addition to Ghauri, Shaheen, and Chinese-supplied M-11 missiles. The nuclear threat has become an established part of regional security affairs, and Pakistani experts credit their nuclear deterrent with having staved off several Indian invasions.

Pakistan also supports Kashmiri insurgents and Islamic volunteers, largely from Afghanistan, who want to fight India. This support included infiltration of Pakistani Northern Light Infantry as well as artillery support into Kargil in 1999. Analysts on both sides of the border anticipate further clashes, and the border has been hotly contested of late.

China's conventional threat has declined notably since the crisis of 1986–87. Its forces in Chengdu military district—which includes Tibet—number 180,000, with one artillery and four infantry divisions. Lanzhou military district—which includes most

of its common border with India—has 220,000 troops, with one armored and four infantry divisions. In 1990 there were 19 regular PLA infantry divisions and one regular tank division in these districts. China also has been undergoing modernization, building short-range ballistic missiles of the M-series and buying naval vessels and advanced aircraft from Russia. These systems have been concentrated in the southeast to threaten Taiwan. Beijing has participated in incidents that have troubled New Delhi, including developing intelligence assets in Myanmar and port facilities in Pakistan and intervening across the de facto boundary with India in 1999.

Despite Chinese political meddling and modestly improved capabilities, it is difficult to find a rationale for excessive concern. Attention by

Exhibiting surface-to-air missiles, Panchkula.

AP/Wide World Photos (Aman Sharma)



Beijing has been conspicuously focused elsewhere, particularly on the United States and Taiwan. New paradigms of warfare are clearly intended to be applied to other, asymmetrically advantaged adversaries to the east. Barring an outbreak of unrest in Tibet, it is unlikely that China will increase its forces in the region. The primary Indian concerns involve its nuclear relationship and support for Pakistan in the form of conventional and unconventional weapons and production facilities. Addressing either issue through a buildup of conventional arms is problematic at best, because of the difficult terrain along the Himalayan border and the obvious expense of acquiring sufficient force to coerce a state as formidable as China.

The extra-regional threat is nominal at best. India has misgivings about use of international interventions to resolve human rights abuses and their implications for national sovereignty. This issue is particularly cogent given the similarities between Kosovo and Kashmir. However, it is not clear what leverage New Delhi could gain by increasing defense expenditures. Its armed forces are capable



Jaguar fighter climbing from Srinagar air base.

AP/Wide World Photos

enough to deter virtually any adversary or coalition of adversaries from sustained assault on its territory and to defend against all but the most dire scenarios. India is attempting to achieve even more conspicuous levels of security by threatening Pakistan with an ill-defined strategic concept of limited war.

An Adequate Force

The late 1980s were a high point in the influence of Indian armed forces. Military thinkers, particularly General Krishnaswamy Sundarji, and defense intellectuals such as Arun Singh, had unprecedented influence on Prime Minister Rajiv Gandhi. Indian forces were involved in regional crises with both Pakistan and China. But the death of Gandhi and the economic crisis of 1990–92 reduced the status of the armed forces. Despite higher levels of spending in the last

three years, the military is hollow. The force structure has been maintained at the expense of its serviceability and sustainability, a range of weapons systems acquired from multiple sources stresses logistics and support services, and force multipliers to increase the overall capability of fighting units have not been acquired.

Outside influences have substantially decreased external threats. A large military, bolstered by a nascent nuclear force, provides a deterrent to any hostile state. Relative security from external threats thus suggests that the current force structure, barring major shifts in resources, is adequate. Lower tech, manpower-intensive forces also

form the basis for dealing with primary threats: ethnic or class-based separatist movements, possibly aided by external interests. Again, relative success in containing and in some cases resolving insurgencies suggests that this current force structure and organization are sufficient for India's needs.

Maintaining adequate defenses does not suggest hostile intent toward neighboring states. Capabilities may be improved incrementally; but the pursuit of revolutionary increases appears unlikely at best. There is no predictable threat that India cannot manage with its existing or planned acquisitions and force posture. Innovative technological solutions are expensive, not perceived as necessary, and endanger existing bureaucratic and organizational preferences. Even under the BJP government, with increased emphasis on foreign and defense policy, there is no vision of military reform, much less revolution. Indian national security policy demonstrates continuity with tradition rather than a new vision of military affairs. Its neighbors should find this fact reassuring.

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AP/Wide World Photos (Dita Alangkara)

General Tyasno Sudarto inspecting ground forces.

To Change a Military— The Indonesian Experience

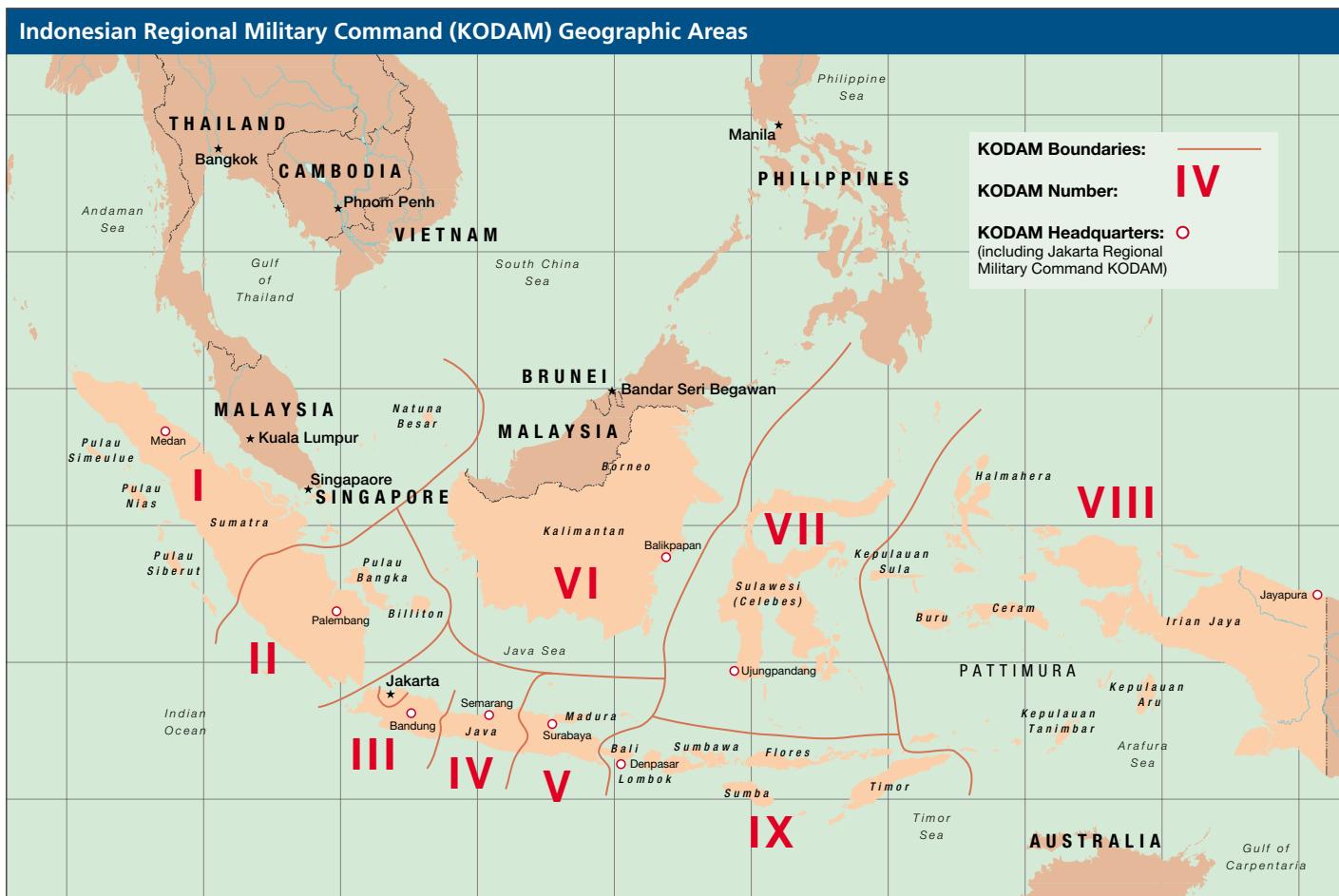
By JOHN B. HASEMAN

There is no better example of military transformation today than the Republic of Indonesia. Since 1997 that nation has undergone dramatic change in political leadership, economic status, and social relations. The armed forces, *Tentara Nasional Indonesia* (TNI), is the most dominant sector in Indonesian

life, but it is faced with tremendous pressure to transform.

Indonesia is inherently centrifugal. The world's largest archipelagic state, it is fragmented geographically into over 17,000 islands and some 300 ethnic and linguistic groups. The largest Islamic nation, it has significant minorities of Christians, Hindus, and Buddhists. Glaring imbalances in economic distribution and social levels add friction. Each of these components of diversity is reflected in the military.

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A Sea of Change

Indonesia's political power structure is going through the greatest change in three decades. The economy has been hit with its worst depression since the early 1960s. There are also intense social problems. TNI is encountering these challenges while it retains responsibility for maintaining security, defending the country, and implementing change within its own structure.

Indonesia has discovered that it is extremely difficult being the third largest democracy in the world after more than 30 years of autocratic rule. The reasons are numerous and intertwined. Key to meeting these challenges is a secure and stable environment within which to implement political, economic, and social reforms.

The nation does not face any significant external threat. An increasingly assertive China looms as the most worrisome regional danger. The

most serious foreign problems involve overlapping claims of sovereignty in the South China Sea between Indonesia and its fellow members in the Association of Southeast Asian Nations (ASEAN) and China. Indonesia itself has no such claims.

many current problems were caused by three decades of tight political autocracy

The military leadership has always identified internal stability as the greatest security issue. Violence between ethnic and religious groups vexes reform. Clashes between Ambonese Moslems and Christians, Dayaks and Madurese, and Sumatran Bataks and Flores Catholics constitute only the most recent outbreaks to wrack the country. Ethnic leaders have

been hard pressed to organize constituencies because the government often assumes that they intend to compete against the ruling party and authorities or other ethnic groups. Traditional ethnic leaders were stripped of power, and their responsibilities were passed to government-appointed leaders at the regency and village level who frequently managed interethnic relations by calling out the army or police.

In short, many current problems were caused by three decades of tight political autocracy during which it was impossible for any type of alternative authority to emerge, practice leadership, or develop a following. The resulting vacuum at the head of emerging political, ethnic, and social groups has encouraged demagoguery and violence. Indonesia needs a strong central

Republik Indonesia

Defense Budget: Estimated at \$2,271 million for 2000; the gross domestic product in 1999 was \$140 billion (\$4,000 per capita).

Manpower: With a population of 206,213,000, Indonesia has a total of 28,809,000 men between 18 and 32 years of age. Active military strength is 297,000. Reserve forces number 400,000. Selective conscription is authorized for 2 years.

Armed Forces: Indonesia has an army with an estimated strength of 230,000 and some 355 light tanks; a navy with 40,000 sailors and 2 submarines, 17 surface combatants, 36 patrol/coastal craft, 12 mine warfare vessels, a force of 13,000 marines, and naval aviation with 1,000 personnel (but no combat aircraft); and an air force with 27,000 airmen and an inventory of 108 combat aircraft.

Paramilitary Formations:

An estimated 195,000 personnel serve in various police, security, and special units.

Source: International Institute for Strategic Studies, *The Military Balance, 2000-2001* (Oxford: Oxford University Press for the International Institute for Strategic Studies, 2000).



Elite KOSTRAD troops marching in Jakarta.

AP/Wide World Photos (Charles Dhurak)

government to keep its volatile population at peace with itself.

In addition to this violence, internal security problems have involved separatist groups in East Timor, Aceh, and Irian Jaya. Some are guerrilla groups whose goal is to secede from the country and gain formal independence for their regions. Others represent a disaffected regional populace whose grievances center around economic and social exploitation by the central government but who do not advocate formal independence.

East Timor was the most trying security problem in 25 years. In the words of the Foreign Minister, Ali Alatas, it was "a pebble in Indonesia's shoe." That pebble caused a major wound for the nation, damaging its international image and consuming countless billions of rupiah and taking thousands of lives. Under an internationally managed process the people of East Timor opted for independence, an effort that was beset by violence perpetrated by pro-Indonesian militias covertly supported by a small element of military and civilian hard liners.

East Timor is now a ward of the United Nations, pending independence.

Events in East Timor have encouraged separatists in the northwestern province of Aceh. The Acehnese have historically opposed rule from Jakarta whether by the Dutch or the independent government of Indonesia. Violence escalated dramatically after Soeharto resigned and many of the troops who had controlled the uneasy security environment in the province were removed.

The rise in confrontation is rooted in many causes. One is historical opposition to outside rule. Another is the legacy of violence inflicted by the Indonesian security forces under Soeharto and since. The tendency of the army to treat all civilians as actual or potential guerrilla supporters, which contributed to failure in East Timor, has harmed government pacification efforts. A record of egregious human rights violations on the parts of both the army and the separatist Aceh

Merdeka guerrillas has inflamed passions on both sides.

Unlike East Timor, only annexed in 1976, Aceh has always been part of the nation. And although problems in East Timor attracted only minor public attention in past years, today most Indonesians are keenly aware of the situation in Aceh and are adamantly opposed to permitting the province to split off.

A third cause of unrest is the diversion of wealth to the central government. The Acehnese resent the fact that only a tiny percentage of earnings from its huge natural resources return to the province.

Irian Jaya remains a security concern as well. Small and uncoordinated separatist groups have conducted antigovernment operations for years. With a change in government, those groups have begun to coordinate their efforts, increasing the threat of separation. However, it remains to be seen just how determined the collectively-named Free Papua Movement is about breaking off. As elsewhere, its grievances include the low return

the province receives from its natural resources as well as resentment of the government and military attitude toward the local tribal population.

Damaged Legacy, Daunting Future

Many will look at emerging political and economic policies for solutions to these problems. But the key to change lies, as always, with the armed forces and their ability to support reform and enforce domestic security. TNI has been the backbone for governments ever since independence. Often embroiled in political warfare during the Sukarno years, the military and principally the army became the primary instrument of power for the 32 years of the Soeharto order. But despite the years of dominance over political affairs the army never seized power and few believe that there is a coup in the

Significant Military Reforms

- Removing the national police from the military chain of command
- Abolishing staff positions in socio-political affairs at TNI headquarters and subordinate regional commands
- Abolishing the post of assistant for security and order at TNI headquarters (usually a national police officer)
- Requiring that all military personnel in civil government posts either retire from the armed forces or return to normal military duties
- Reducing dedicated military seats in Parliament from 100 to 75 in 1990 and to 38 in 1998, and totally eliminating them by 2004
- Prohibiting any role by the military in day-to-day political activity
- Prohibiting political party bias
- Maintaining neutrality in the 1999 general election and all future elections
- Revising doctrinal publications and instruction to reflect the changing role of the military in society.

making. Indonesia can be said to have a government with a powerful military, but not a military government.

The armed forces have a unique dual mission (*dwi-fungsi*). Instead of separating military and civilian political spheres of influence, this system combines them. For years the political role of the military was all-inclusive, intrusive, and the dominant force in the country's social and political life. This doctrine is now the focus of intense debate and demand for change.

The *dwi-fungsi* system and its territorial organizational structure, which parallels civilian government down to the village level, are the two primary instruments through which the military has dominated political affairs the past four decades. It is these two instruments which reformers, both within and outside the armed forces, target for change. And it is the degree of reform of these key instruments which encompasses the greatest range of debate within both the army and the civilian leadership. Military reformers agree that considerable change is needed, primarily in those aspects of behavior best categorized as political. But all except the most zealous reformers also feel that *dwi-fungsi* will remain, albeit in altered form.

Some facets of the role of the armed forces in society are particularly subject to change. The process has already begun as profound transformation sweeps through the political, economic, and social environments. First, the military must be called to account for human rights abuses. Its actions in Jakarta, Aceh, Irian Jaya, and the former province of East Timor have galvanized

only after TNI regains popular respect can it effectively help to implement political reform

public opinion and demands for action. Second, it must undertake basic reform in its overall political role, including the controversial *dwi-fungsi* doctrine, and in its structure and leadership.

Regaining Prestige

TNI has plunged to its lowest-ever level of public esteem. A proud institution born of the independence struggle against Dutch colonialism, its doctrine has always stressed the importance of its popular mandate as an army of the people.

Ironically, it was the dramatic move toward democracy—which could not have occurred without the role played by the military leadership in the resignation of Soeharto in May

1998—that led to the decline in the prestige of the armed forces. Today the national press is revealing a legacy of military complicity in human rights abuses. No longer under attack by international news media and foreign human rights activists alone, the armed forces are vilified by the domestic press as well as the public. Their reputation has also been damaged by serving as a political tool of the Soeharto government. Only after TNI regains popular respect can it effectively help to restore the economy and implement political reform.

Revelations of alleged military atrocities have stunned the rank and file of the armed forces and outraged the nation at large. TNI leaders are in a quandary. The government is determined to investigate crimes against citizens in Aceh and to institute legal proceedings against senior officers implicated in East Timor. It is understood by the armed forces that any scrutiny of past events must be perceived as fair and complete. This will be difficult. But it is essential to the restoration of military prestige that the probes move forward.

The investigation of such allegations could destabilize TNI leadership by summoning active and retired senior officers to the bar to account for their own actions and those soldiers who served under them. The concept of command responsibility, implemented only in the 1990s, is weak and unevenly applied. And the degree to which officers may be legally called to account for the actions of troops under their command in the past is unprecedented in Indonesian history.

Officers complain that they are criticized for human rights violations when taking forceful action to end or avoid violent confrontations yet are censured for failing to act. To a force poorly trained and equipped for non-lethal crowd control the issue is often stark: allow a town to be ravaged by a marauding, out of control mob or stop the damage with deadly force. There is seldom any middle ground.



Indonesians being briefed aboard USS Germantown.

In 1999 the former commander in chief of the armed forces, General Wiranto (who is now coordinating minister for political and security affairs), issued a public apology for past military violence. According to press accounts, he told soldiers who peacefully secured Parliament during the election of President Abdurrahman Wahid and Vice President Megawati Sukarnoputri, "We are sorry for the victims, and we will pray for them. We ask for forgiveness from people who feel we did wrong, from the victims, from the students. . . . The reform process is for the people, not the president, not for the head of the military, but for the people only."

Wiranto has been implicated by the national human rights commission for being cognizant of the violence in

East Timor by pro-Indonesian militias—reportedly supported and controlled by hard-liners in special forces and intelligence operatives—and failing to control it. Prior to dropping his reelection campaign, Bacharuddin Habibie chose Wiranto as his vice presidential running mate. But the criticism of the general was so rampant that a group of senior officers informed him that they would not support his bid to secure the presidency or the vice presidency.

Doctrine and Leadership

TNI leaders issued a white paper that outlines transformation goals while also supporting political and social reform in government and society. A primary target is *dwi-fungsi*.

Internal reform has been a wrenching experience. While military personnel are trained and indoctrinated to take part in the political and social life of the country, reform stresses that they return to military tasks. Many officers have long advocated removing the armed forces from politics and providing more time to focus on professionalization. During the Soeharto era such thinking was anathema and its advocates found their careers stifled, but since then such officers have increasingly been advanced.

Not all senior officers support reform. The so-called status quo faction favors the longstanding system that provides perquisites and lucrative post-retirement government and quasi-business posts to senior officers. The TNI commander in chief has lately promoted both factions, advancing reformers and status quo supporters alike. His logic typifies the dilemma of balancing both varied approaches to reform and alternate power centers to control the rise of new leaders.

The contest for influence between reformers and status quo officers is only the most recent contest among senior ranks. The army in particular has been noted for loyalties among academy classmates and dominant personalities. During the 1980s the competing poles were represented by the charismatic armed forces commander in chief and intelligence czar, General L.B. ("Benny") Moerdani, a Christian, and those opposed to the influence of the military intelligence community. Moerdani lost his post after criticizing the growing avarice of the children and cronies of Soeharto. The armed forces then went through a de-Moer-

Changing Face of Indonesia's Military Leadership

Position	Soeharto Era Incumbent	Wahid Era Incumbent
Armed Forces Commander	General Wiranto	Admiral Widodo
Army Chief of Staff	General Subagyo	General Tyasno Sudarto
Commander, Army Strategic Reserve Command (KOSTRAD)	Lieutenant General Prabowo Subianto	Lieutenant General Djadjad Suparman
Commander, Special Forces Command (KOPASSUS)	Major General Muchdi	Major General Syahrir
Commander, Jakarta Regional Military Command (KODAM)	Major General Syafrie Syamsoeddin	Major General Ryamizard

Intervention in East Timor

In May 1999 Indonesia authorized the United Nations to organize and conduct a consultation to determine whether East Timor would accept special autonomy within the republic. In June 1999 the Security Council established the U.N. Mission in East Timor (UNAMET). In agreements reached one month earlier, UNAMET was tasked to oversee a transition pending a decision.

The East Timorese voted in August 1999 to begin a process leading toward independence. The Security Council then authorized the International Forces East Timor (INTERFET), under a unified command structure led by Australia, to restore peace and security in East Timor, protect and support UNAMET, and facilitate humanitarian assistance within force capabilities. At its peak, Operation Stabilize drew on almost 10,000 personnel from 47 countries. In support of the operation, the United States established U.S. Forces INTERFET. During this effort, a U.S. joint force of 425 servicemembers was deployed to Darwin, Sydney, and East Timor, supported by 5,000 naval personnel on board five ships.

The U.N. Transitional Administration in East Timor (UNTAET) was formed in October 1999 to exercise legislative and executive authority during the transition. Immediately thereafter the mission set up headquarters in Dili. The change of command from INTERFET to UNTAET was completed in February 2000 and its operations are ongoing.

JFQ

danization process in which intelligence officers and Christian officers perceived as loyal to Moerdani had their careers blocked. The so-called tactical professionals were beneficiaries as field experience and tactical command became more important for advancement than assignments in the military intelligence service.

Meanwhile, the ambitious Prabowo Subianto, first in his class at the military academy and the U.S. Army Special Forces Officer course,

contests for power have distracted many officers from addressing issues of professionalism

soon became recognized as a future leader. The son of a preeminent economist and, far more significantly, Soeharto's son-in-law, he gathered friends and classmates around him who combined professional competence with ruthless ambition.

The opposite pole was a larger group of competent officers whose careers were carefully balanced against Prabowo but who were always one step behind or had one good assignment too few. Prabowo's overweening ambition and arrogance soon antagonized most senior officers. He was accused of complicity in the disappearance and death of antigovernment activists as well as in leading troops suspected of atrocities in East Timor and Aceh. Prabowo and his clique lost power and any hope of leadership after Soeharto left the scene.

Today the contest is between those loyal to Wiranto, now a senior cabinet member, and reformers, loosely coalesced around Major General Agus Wirahadikusumah and to a greater extent Lieutenant Generals Agum Gumelar and Soesilo Bambang Yudhoyono. But in a demonstration of power, Wiranto placed Gumelar and Yudhoyono in the Wahid cabinet where they are less likely to be competitors. Wirahadikusumah is a regional commander in far-off Sulawesi, where his reformist influence is less than it would be in policymaking circles in Jakarta. Wiranto is stained by his own inability

or unwillingness to control pro-Indonesia militias in East Timor, and he may find himself under judicial scrutiny for his role in the violence.

Contests for power among senior military officers have distracted many Indonesian officers from addressing issues of professionalism and reform. Perhaps more significantly, the leaders are so personally concerned with political maneuvering that they have not devoted sufficient attention to developing a vision for the future of the armed forces.

Senior TNI leaders have always attended to military politics under a controlled system that promoted approximately equal numbers of officers from every defined faction and cohort group so competition would prevent any individual from dominating the armed forces. Soeharto was master of this tactic. He and several of his commanders in chief practiced this version of divide and rule to ensure dominance of the military.

The rise of contenders usually produced a commander who either secured the loyalty of all groups or whose personal loyalty to the president was so unquestioned that he had the legitimacy to control the armed forces. The same practice exists in the post-Soeharto era. There continues to be a balance among groups of senior officers competing for influence. The new government has cleverly juggled key positions.

In contrast to the Soeharto era, when the president commanded the loyalty of the country's five most powerful officers, the leadership today is more diverse. Although unquestionably loyal to the institution of the presidency, these senior officers do not have personal loyalty as a group to either the most powerful military figure in the country, General Wiranto, or even to the president.

TNI leaders, whether intentionally or not, have returned to the traditional practice whereby divided loyalty is deliberately perpetuated to ensure that no officer has the complete allegiance of the armed forces. Thus the advent of democracy in Indonesia has resulted in a return to apolitical institutional loyalty. TNI will support the presidency but not the individual in uniform



the armed forces in every facet of government.

There is considerable belief that this doctrine remains valid. A respected senior civilian official in the Wahid government told the author:

There is still no substitute for the army territorial structure in rural Indonesia, where the civilian government is simply not adequate. The [noncommissioned

Indonesia's armed forces—*Angkatan Bersenjata Republik Indonesia (ABRI)*—consist of the army, navy, air force, and police. A reorganization carried out in 1985 modified the chain of command. Four multi-service Regional Defense Commands (KOWILHANS) and the National Strategic Command (KOSTRANAS) were disbanded and the Military Regional Command (KODAM) or area command was established as the key organization for strategic, tactical, and territorial operations conducted by all services. The chain of command now flows directly from the ABRI commander in chief to the ten KODAM commanders. **JFQ**

AP/Wide World Photos (Dita Alangkara)

officer] in the village still has a role to play. But in urban [areas] there is now an adequate civilian structure and some changes should be made there.

Justified by *dwi-fungsi* as a sociopolitical force, in reality this structure enabled the armed forces to keep tabs on potential and real opponents of the government, stifle traditional local leaders, control campuses, censor regional newspapers, and ensure support for Soeharto through the Golkar Party. In return, the military on every level gained extra-budgetary income for troop support—and lined the pockets of many officers.

This territorial structure is the subject of controversy. Most civilians realize that it is needed to some degree for internal stability. But the military role in the political system is being reduced and the *dwi-fungsi* system is under pressure. The territorial structure is its most visible component and is thus among the easiest to attack. The central position of this organizational

(Wiranto) most likely to be in a position of power. This circumstance should support a slow but steady trend toward political and military reform.

Future Organization

An internal debate is underway as to how the armed forces should be organized to carry out their missions under a democracy. The exchange is most pertinent to the army, which because of the *dwi-fungsi* doctrine has been organized for both territorial/political and tactical/operational roles. More than half of the army is assigned to the territorial structure, which parallels civil government from province

level—where major generals head regional commands—down to noncommissioned officers responsible for one or more villages. The structure is based on the military's experience in guerrilla warfare, in which intimate knowledge of the terrain, population, and resources is vital.

The official explanation for the structure is that it allows commands to learn every detail of each region to prepare for an outside invasion, when the army would melt into the countryside and conduct guerrilla warfare. In reality, the Soeharto era changed the thrust of the territorial structure to population control. An extensive domestic intelligence effort gathered data on every aspect of life and involved

structure is now at the heart of an unprecedented public debate among senior officers.

Under the Habibie government, in response to high levels of ethnic and religious violence across the country before and after Soeharto resigned in May 1998, the armed forces made plans to add up to eight two-star regional commands to maintain order. These new commands would have returned the territorial structure to the level that existed through 1981 (when streamlining reduced the number of regional commands from sixteen to ten).

Status quo officers claimed that expanding the territorial structure would improve security. Their argument was flawed because the military had already committed itself to a reduced political role; expanding rather than reducing the territorial structure would reverse that trend. But under the status quo, officers also covet the perquisites of service in the structure: personal power, income, and political stature.

Reformers countered expansion plans by decrying the costs of establishing new commands and emphasizing the military commitment to reducing its political prominence. These officers think that some province-level commands should be consolidated, and one leading reformer called for all the territorial structure below province level to be abolished. This plan would save money in a time of economic difficulty and make more resources available for traditional tactical units.

There are advantages and disadvantages to both sides of this issue, but the significant point is that such a debate is underway at all. It never would have occurred during the Soeharto era and is a positive indication that reformist tendencies are expanding in the formerly closed universe of the armed forces.

Senior military leaders have not made a final decision, but some form of reduced presence seems most likely. The newly-appointed army chief of staff, General Tyasno Sudarto, has implied that lower level territorial structure should be abolished in urban areas but retained in rural districts. He



AP/Wide World Photos (Dita Alangkara)



AP/Wide World Photos (Joel Ruano)

has also indicated that regional commands will become more flexible in adjusting to the social tenets of the various regions.

The Indonesian armed forces remain the single most powerful segment of national society. Though small in numbers, their influence is widespread. Unprecedented internal debate

is underway which provides reassurance that military reform is moving forward. The psychological consequences of change can be overcome and will result in transforming TNI into a more responsive, responsible, and representative institution.

JFQ

French Forces



Keeping an eye
on Sarajevo.

ECPA

for the 21st Century

By JEFFREY B. JONES

Despite the fact that it is not integrated into the NATO military structure, France is a pivotal security partner for the United States. While its defense policy is marked by independence, its military capabilities complement those of the Alliance. With their role in dissuasion, prevention, projection, and protection, the French armed forces are global, nuclear, conventional, and unconventional, and are being transformed to become significantly smaller, restructured, and more professional.

An Engaged Ally

France plays an important role in defending Western interests and also compares favorably with other allies in terms of defense policies—which support those of the United States—as well as levels of spending sufficient to maintain a capable and credible force.

Perhaps most noteworthy is the considerable involvement of France in peace operations and commitment to an effective nuclear and conventional defense posture as part of its strategy and that of the Atlantic Alliance. Despite often distinctive views on collective defense and international security, Paris has consistently demonstrated a solid political and military

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Republique Française

Defense Budget: Estimated at \$27 billion for 2000; the gross domestic product in 1999 was \$1.4 trillion (\$24,000 per capita).

Manpower: With a population of 59,425,000, France has a total of 6,241,000 men between 18 and 32 years of age. Active military strength is 294,430 (including 18,920 women) for the army, navy, and air force, plus members of the central staff, *Service de santé*, and *Service de essences* (the National Gendarmerie is also part of the armed forces; see separate listing below). In 1999 Reserve forces, which are currently undergoing reorganization, total 419,000—army, 242,500; navy, 97,000; and air force, 79,500.

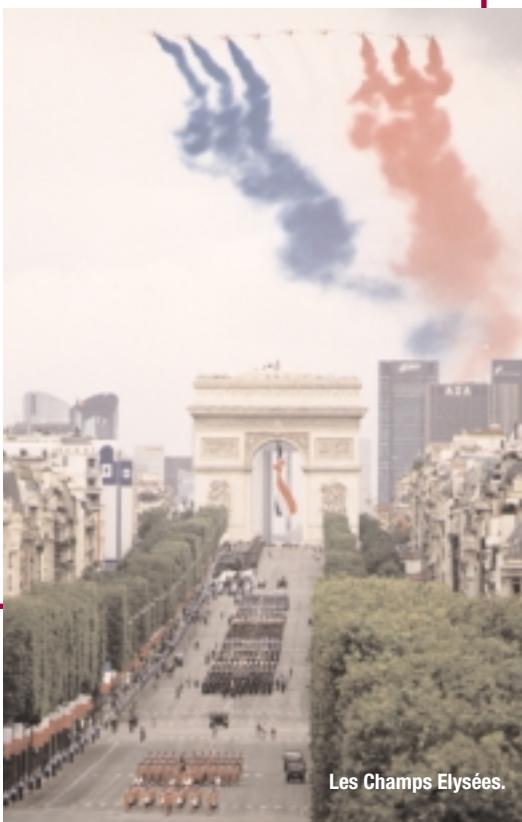
Armed Forces: France has an army of 169,300 soldiers and some 834 main battle tanks; a navy with 49,490 sailors and 11 submarines, 35 principal surface combatants, 40 patrol/coastal craft, 21 mine warfare vessels, a force of 2,000 marines, and naval aviation with 3,500 personnel and 52 combat aircraft; and an air force with 60,500 members and an inventory of 517 combat aircraft.

Paramilitary Formations: A total of 94,950 personnel (including 4,970 women) serve in the national gendarmerie—a paramilitary police force—which is comprised of territorial and mobile forces as well as naval and air forces gendarmeries, an anti-terrorist unit, the Republican Guard, and other specialized units.

Source: International Institute for Strategic Studies, *The Military Balance*, 2000–2001 (Oxford: Oxford University Press for the International Institute for Strategic Studies, 2000).

commitment to allies and security partners, most recently in the Balkans, but also in Cambodia, Haiti, Rwanda, Somalia, and the Persian Gulf. It backs a European Security and Defense Identity (ESDI), which one day could enable Europe to react to regional crises in which the United States is not engaged.

Beginning in 1996, France embarked on the most intense effort to redefine its relationship with the Alliance since President Charles de Gaulle withdrew from the integrated military structure thirty years earlier. In 1998 President Jacques Chirac and the Socialist government under Prime Minister Lionel Jospin gave considerable impetus to this effort. France is continuing to work with allies to implement intermediate measures while pressing for a



France is a global power, with over 46,000 military personnel outside its border or in its territories

larger European role in the Alliance. Paris remains an active participant in the political consultative process and an overall supporter of Alliance goals and objectives. Its considerable nuclear

and conventional capabilities contribute to the NATO deterrent posture and have been a force for stability worldwide, particularly in Africa.

France is arguably a global power, with over 46,000 military personnel outside its borders or in its territories. Troops serve as sovereignty forces in overseas departments and territories and bilaterally under defense agreements with African states. Prepositioned forces in Africa and the South Pacific have sought to provide stability and military assets in those areas where

American presence is modest. France is proud to be one of the top three peacekeeping nations in the world. Its First Armored Division and Franco-German Brigade are assigned to EUROCORPS, which would come under the command of Supreme Allied Command Europe in time of war. Troops in Germany have been drawndown as part of overall restructuring of forces, though some 9,500 remain.

Paris collaborated closely with Washington on the diplomatic, political, and military levels to achieve a cessation of hostilities in Bosnia under the Dayton Accords and to implement a viable peace settlement. Its diplomatic and political leverage was instrumental in gaining the cooperation of the warring parties. It was the largest troop contributor to the earlier U.N. Protection Force (UNPROFOR) and subsequently became one of the largest contributors to Implementation Force (IFOR). When IFOR was succeeded by Stabilization Force (SFOR) in 1997, France remained a primary contributor of manpower, resources, and leadership and continues to work closely with the United States through diplomatic avenues to enforce full compliance with the Dayton Accords. A French general officer currently is in command of the multinational division in south Bosnia.

Kosovo

France joined with the United States and other nations during 1998 to constrain violence in Kosovo by political means. At the end of that year, with the international community mobilized to enforce a cease-fire and the decision

by the Alliance to use force, it agreed to act as the lead nation, contributing 800 soldiers to the NATO-directed Kosovo Extraction Force ready to intervene should monitors require protection or evacuation. During air operations conducted in March–June 1999, it was the second largest contributor, deploying ground attack, surveillance, combat air patrol, and refueling aircraft as well as unmanned aerial vehicles. With almost 8,000 troops on the ground, its commitment was significant.

The French learned many lessons during Operation Allied Force. Politically, for the first time since the Cold War, Europeans intervened in a major crisis; and the majority of ground forces were European. Paris had an important voice in operational matters and maintained control of its forces. Thus a predominant political theme from its perspective is the need to construct a European defense identity. Militarily, the French saw the Kosovo experience as validating their technological sophistication, acquisition policies, and reorganization plans.

Another reinforced lesson was the need for interoperability. In addition to its role in the bombing campaign, France was the only European nation to deploy a range of intelligence and surveillance platforms: Helios satellites, reconnaissance aircraft, heli-borne air-ground radar systems, electronic collectors, and drones. Throughout the campaign France had to synchronize these assets with the capabilities of other coalition forces.

There were also a number of deficiencies, although many had already been programmed for correction. The French noted problems in the acquisition, integration, and exploitation of real-time intelligence, tactical transportation, aircraft identification, satellite navigation of weapons, precision strike munitions, air defense suppression, and bomb damage assessment. They knew that gaps in technology must be overcome for a better balanced coalition effort with the United States.

Fundamental Change

The French programming law for 1997–2002 began a period of change that will transform the military into a professional force capable of rapid



force projection. In 1997 the total number of personnel in the defense establishment was slightly over 574,000, of which 305,627 were career, 169,520 were draftees, and 98,969 were civilian.

Though France is committed to maintaining the unilateral capacity to meet national interests, it acknowledges a growing requirement to project expeditionary forces and provide corresponding theater joint command resources to work with allied forces. Toward that end defense policymakers have identified the following priorities:

- commanding/conducting joint operations in a national or multinational framework
- intelligence, protection, and strategic mobility
- surveillance and protection of national territory
- force projection and support
- rebuilding additional forces should a major threat reappear.

Army

France is currently downsizing, restructuring, and professionalizing its army and expects to meet most of its self-imposed deadlines by the end of 2002, with complete reorganization by 2015 when an entire new generation of systems should be fielded. The goal is acquiring the capability to rapidly deploy either a force of 50,000 for NATO non-article V contingencies or a force of 30,000 to high-intensity regional conflicts for up to a year, while simultaneously maintaining 5,000 personnel for low intensity combat or peace operations.

The army has reorganized according to principles of modularity and



55th Signal Company, Combat Camera (Milton H. Robinson)

economy of resources. Two corps and seven division headquarters were eliminated in 1999. The building blocks of the operational forces are the remaining 85 regiments, grouped under eight combined arms brigades and one aviation brigade in addition to four combat support and two logistics brigades. Regiments will be task-organized for both training purposes and during operations, albeit not necessarily with the same peacetime brigade headquarters. Moreover, four force headquarters are being formed to replace the division-level commands. Responsible for

brigade and regimental operational planning and exercises, but without permanently assigned forces, these headquarters also have a mission of rapidly deploying to organize the nucleus of a NATO-style division headquarters or a national joint task force headquarters. The new corps level headquarters, Land Force Command, was formed in 1998 from Third Corps Headquarters and the Rapid Reaction Force and is located in Lille (not far from Supreme Headquarters Allied Powers Europe in Mons, Belgium). In addition to its role as headquarters for army operational forces, this headquarters will function as a command and control organization for the NATO environment—the headquarters for a multinational corps or the core of a combined joint task force.

Proposed legislation will decrease the formerly optimistic figure of available reserves from roughly 250,000 to 100,000.

Figure 1. Army-to-Army Training

Activity	U.S. Army	French Army	Location
Company exchange	82nd Airborne Division	11th Parachute Division	France/U.S.
Mountain training	1st/10th Special Forces Battalion	27th Mountain Division	France
Battery exchange	XVIII Airborne Corps Artillery	11th Parachute Division	France/U.S.
Military police platoon exchange	21st Theater Army Area Command	601st Regiment Contrôle Routier	France/Germany
Airborne training	Rigger Company, U.S. Army Europe	St. Cyr	France
Language training	21st Theater Army Area Command	St. Cyr	Germany
Cadre exchange	101st Airmobile Division	4th Airmobile Division	France
Platoon exchange	101st Military Intelligence Battalion	54th Signal Regiment	France/Germany
Company airborne training	Southern European Task Force	11th Parachute Division	France/Italy

Mirage 2000C.



1st Combat Camera Squadron (Greg L. Davis)

Figure 2. Army-to-Army Exchange Program

U.S. Army	French Army
St. Cyr, Coetquidan	U.S. Military Academy, West Point
Doctrine and Training Staff, Paris	U.S. Army Training and Doctrine Command, Fort Monroe
Army and Joint Staff Course, Paris	U.S. Army Combined Arms Center, Fort Leavenworth
Signal School, Rennes	U.S. Army Signal School, Fort Gordon
Aviation School, Le Luc	U.S. Army Aviation School, Fort Rucker
Engineer School, Angers	U.S. Army Engineer School, Fort Leonard Wood
Infantry School, Montpelier	U.S. Army Infantry School, Fort Benning
Armor School, Saumur	U.S. Army Armor School, Fort Knox
Artillery School, Draguignan	U.S. Army Field Artillery School, Fort Sill
	U.S. Army Intelligence School, Fort Huachuca
	U.S. Army Air Defense School, Fort Bliss
	XVIII Airborne Corps, Fort Bragg
	National Simulation Center, Fort Leavenworth

officers and NCOs must now learn operational English as well as NATO staff procedures

Some 50,000 will be assigned to the National Gendarmerie, a police force under the control of the Ministry of Defense. Moreover, the army will also benefit from the new system which assigns a company of reservists to each regiment.

When discussing interoperability with allied forces, French army leaders list three areas for emphasis—equipment, information systems, and procedures. Officers and NCOs must now learn operational English as well as NATO staff procedures, which are routinely used in national training and exercises. Interoperability requirements are changing army education and personnel systems. Officers are also on notice that

schooling and many assignments now require English proficiency as well as familiarity with Allied army organization and weapons systems.

There have been delays in some programs such as the MISTRAL air defense and TRIGAT antitank missile systems. Big ticket items such as the latest Leclerc tank and Tiger attack helicopter have been preserved. Modernization of C4I capabilities is a top priority as seen in the fielding of an enhanced information system that allows the transfer of data to multiple tactical levels in real time. A follow-on tactical communications system is also in the works. Moreover, there are continuing advances in wheeled vehicles, optics, small arms, lasers, electronics, intelligence, and information systems.

An important element of the professional army is the 30,000-member *Troupes de Marine*. Originally formed to serve in the colonies—first under the Navy Ministry and later the Ministry of War—they were known as *Troupes Coloniales* or *La Coloniale* during the first half of the 20th century. Because the majority were career soldiers, transitioning to an all professional force was relatively easy. Some of the most highly decorated units in the French army belong to *Troupes de Marine*, and they have played a dominant role in recent interventions. Moreover, many senior army leaders have come from their ranks, including the current chairman of the joint staff. There are 18 regiments and 6 battalions (comparable in size to U.S. battalions) as well as several other units which are deployed independently. *Troupes de Marine* still are rotated overseas, acting as military advisors in former African colonies which maintain security agreements with Paris.

Navy

In terms of tonnage, French naval forces are the fifth largest in the world, ranking behind the United States, Russia, Britain, and Japan. The five-year defense reform and restructuring plan will cut the size to 45,000 sailors and 11,000 civilians with 80 ships by 2002. Reserves will be reduced in strength to 6,000 sailors.

Foch and *USS Dwight D. Eisenhower*.



Marine Nationale

Figure 3. Navy-to-Navy Exchange Program

U.S. Navy	French Navy
Super Etandard pilot aboard <i>Foch</i>	F/A-18 instructor pilot (VFA-106)
Arresting gear officer, <i>Charles de Gaulle</i>	Arresting gear officer, Lakehurst, New Jersey
Instructor, French Naval Academy, Brest	Instructor, U.S. Naval Academy, Annapolis, Maryland
EOD diver, Cherbourg	Mine warfare instructor, Ingleside, Texas
CDC officer, <i>Duquesne</i> , Toulon	Division officer, <i>USS Kauffman</i>
SEAL, Commando Hubert, Toulon	SEAL Team 2, Little Creek, Virginia
Dauphin SAR helo pilot, Toulon	Flight instructor, Naval Air Station Meridian, Mississippi
E-2C NFO, Lorient	E-2C NFO (VAW-120), Norfolk, Virginia

The four operational headquarters are the Mediterranean fleet based at Toulon, Atlantic fleet at Brest, Indian Ocean fleet in Djibouti, and Pacific fleet at Tahiti. Most of the power projection fleet, *Force d'Action Navale*, including the carrier *Foch*, anti-air warfare ships, and amphibious ships, is based in Toulon.

Like the army, the French navy has worked with American forces since the Revolutionary War and maintains close relations to this day. Its ships patrol every corner of the globe protecting national interests in overseas territories and supporting Alliance objectives. As

an indicator of the strong commitment to NATO operations in the Balkans, the 36-year-old *Foch* with its battle group sortied two weeks early from Toulon in January 1999 for duty in the Adriatic in response to the Kosovo crisis and remained on station until June, even after American carriers had withdrawn.

The highest navy priority is completion of the nuclear-powered carrier *Charles de Gaulle*, which displaces 40,000 tons and accommodates 40 aircraft, including the new Rafale fighter

and U.S.-built E-2C Hawkeye. Begun in 1986, it was designed from the keel up to be compatible with the U.S. Navy F/A-18 and has the same basic catapult and arresting gear systems as *Nimitz* class carriers. *Foch* will be decommissioned as *Charles de Gaulle* becomes operational.

Aging embarked fixed-wing aircraft are being retired. Rafales replaced modernized F-8P Crusaders in 1999. The strike and reconnaissance roles will be filled by two squadrons of laser guided bomb-capable Super Etendards until replaced by a strike version Rafale in 2005. The Alizé early warning aircraft will be replaced by the E-2C Hawkeye in 2000, an enormous improvement in early warning capability. A fleet of 28 Atlantique maritime patrol aircraft is being supplemented by Falcon 50 maritime surveillance planes. The helicopter fleet will be upgraded with 27 NH-90 utility and anti-submarine warfare helicopters.



range M-51 submarine-launched ballistic missile, to be fitted in all *Le Triomphant* class submarines. As the new boats enter the fleet, those of *L'Inflexible* class will be decommissioned, maintaining a permanent force of four.

Each year five French naval officers travel to New London for discussions on submarine tactics and systems developments with American counterparts. Their visit includes opportunities to use submarine tactical training simulators. In addition, all tactical pilots receive training up through carrier qualification at Meridian Naval Air Station.

France, Italy, and Britain have engaged in the tripartite Horizon anti-air warfare program, which will be fully compatible with NATO systems. However, with Britain's withdrawal from the program, the future is unclear. In accord with doctrine on developing more deployable forces, the navy launched two 12,000 ton *Foudre* class transports and plans to construct two even larger ships capable of embarking a JTF staff.

To keep up with the C⁴I goal of continued interoperability, *Charles de*

Gaulle as well as the E-2C Hawkeye, E-3F AWACS, and Rafale will have the Link-16 data link. The carrier will have a joint maritime command information system terminal and also the joint operational tactical system. A Franco-American naval working group meets every six months to enhance the compatibility of communication and combat systems.

Air Force

Exhibiting many of the same strengths as its American equivalent, the French air force is modern and technically sophisticated. Like other services, it is undergoing profound changes in force structure, professionalization, and force projection capabilities.

The air force has global commitments that in 1998 consisted of 14 bilateral and 9 NATO or Partnership for Peace exercises as well as 11 deployments as permanent detachments or in support of operations. It has more than a thousand aircraft, including fighters, C-135 tankers, C-130 and C-160 transports, and assorted small transport aircraft and helicopters.

The service has responded to evolving challenges since the Persian

Six nuclear attack submarines are based in Toulon, with at least one deployed at all times. Operations typically take place in the Mediterranean and Atlantic, but there are deployments to the Indian and Pacific Oceans as well. Six new-generation *Barracuda* class nuclear attack submarines will begin replacing older models on a one-for-one basis in 2010. All diesel submarines are being phased out. The mass of the nuclear deterrent is contained in four nuclear-powered ballistic missile submarines based in Brest, also with at least one deployed at all times. The new generation 9,000 ton *Le Triomphant* joined the fleet in 1997 and *Le Temeraire* in 1999. *Vigilant* will arrive in 2003 and a fourth in 2008, coincident with the 8,000 kilometer

Gulf War. Because France does not perceive a direct threat from a European power, moving to an all volunteer

because France does not perceive a direct threat, moving to an all volunteer force is designed to project power

force is designed to project power. The air force has been striving to improve interoperability with nations in Europe as well as NATO. One example occurred in 1998 when eight Mirage 2000s, two C-160 Transalls, and 200 personnel took part in Exercise Red Flag in Nevada. Using iron bombs and laser guided munitions, the French were highly successful in this realistic exercise, which validated their training and tactics and demonstrated a high degree of interoperability.

Although exercises like Red Flag can be critical in gauging progress in training and testing new tactical ideas, the best indicator of how effectively air forces operate together is a real crisis. The French have flown alongside the United States in Operation Southern Watch, in the skies over Bosnia, and in Kosovo. They have furnished 800 of the 1,800 troops to the Kosovo Reaction Force prepared to evacuate observers. French personnel took a principal role in leading an Alliance operation for the first time since leaving the integrated command structure. The air force deployed six C-130s, two C-160s, and a DC-8 to move supplies necessary to establish operations in Skopje and to deliver humanitarian aid to Albania and Macedonia. More resources are sustaining ground operations in Kosovo. Throughout the NATO air operations, the French were the second largest contributor, with over 100 dedicated aircraft. Their reconnaissance assets included Crecerelles and CL-289 drones as well as Cougar Horizon helicopters, which operated in concert with the joint surveillance and target attack radar system (JSTARS).



U.S. Navy (Shawn Ehlund)

The air force is undergoing a transition, adapting to new missions which require flexibility, rapid reaction, and sustainability. It trains and is interoperable with U.S. and other NATO forces and seeks opportunities to improve its ability to operate in joint and combined environments. The acquisition of the Rafale and modernization of the Mirage 2000 will provide a highly effective force well into the 21st century. The changing nature of the threat and need for mobility, however, will create problems because of the age of French assets, which do not meet requirements established for the future. The government is looking at various options which cannot be realized until 2010. Meanwhile, France will use tactical lift assets and sealift and rent outsized cargo lift.

Special Operations

With headquarters located on an air force base inside a mountain north of Paris, the Special Operations Command was organized in 1992 and represents the only truly joint command in the French military. The headquarters is manned by 60 officers and NCOs from each service, with liaison from both the national gendarmerie and military health services. This command oversees foreign military assistance, special unit training, hostage extraction and rescue, combat search and rescue, counterterrorism, direct action,

VIP protection, raids, deception, psychological and civil-military operations, humanitarian assistance support, and tailored communications links. Equipped with state-of-the-art technology, it can be reinforced by the 11th Airborne Brigade, 27th Mountain Brigade, and 13th Airborne Dragoon Regiment for reconnaissance and intelligence collection, and by naval forces. It complements the intervention/protection role of the national gendarmerie and the French counterparts to the Defense Intelligence Agency and Central Intelligence Agency.

France and America are bound by common strategic interests and shared values. In crises that outstrip individual nations or collective resources, partners must take advantage of their respective capacities, technological strengths, forward presence, and lessons which enhance interoperability. Understanding capabilities of the French armed forces and rebuilding bridges are mandates for the future. France has been a traditional ally of the United States. As Charles De Gaulle reportedly remarked to Dwight Eisenhower during the U-2 Crisis in 1960, "I do not know what Khrushchev is going to do, nor what is going to happen, but whatever he does, or whatever happens, I want you to know that I am with you to the end."

JFQ

Poland



USS Clarke prior to being turned over to Polish navy.

AP/Wide World Photos (Gary C. Knapp)

Prepares for the Alliance

By JEFFREY SIMON

In March 1999, Poland, Hungary, and the Czech Republic joined NATO. Of these three new members of the Atlantic Alliance, only Poland enhances Allied military capabilities. Poles are currently participating in Allied operations on the ground. The 18th Air Assault Battalion is serving with the U.S.-led multinational brigade in eastern Kosovo. In part, Poland's po-

tential reflects its stability, which can be attributed to a remarkable transformation in civil-military institutions. More than any other former member of the Warsaw Pact, the Polish Republic has been able to adapt to the NATO model for modern Western forces.

The NATO Standard

Together, the Brussels Summit on the Partnership for Peace (PFP) program in 1994, the *Study on NATO Enlargement* released in 1995, the Madrid Summit in 1997 which invited the

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Rzeczpospolita Polska (Polish Republic)

Defense Budget: Estimated at \$3.2 billion for 2000; the gross domestic product in 1999 was \$157 billion (\$7,400 per capita).

Manpower: With a population of 38,648,000, Poland has a total of 4,422,000 men between 18 and 32 years of age. Active military strength is 217,290. Reserve forces number 406,000—army, 343,000; navy, 14,000; and air force, 49,000.

Armed Forces: Poland has an army of 132,750 soldiers and 1,704 main battle tanks; a navy with 16,860 sailors and 3 submarines, 3 principal surface combatants, 25 patrol/coastal craft, 24 mine warfare vessels, and naval aviation with 2,460 personnel and 28 combat aircraft; and an air force with 46,200 members and 267 combat aircraft.

Paramilitary Formations: A total of 21,500 personnel serve in border guard and police units.

Source: International Institute for Strategic Studies, *The Military Balance, 2000-2001* (Oxford: Oxford University Press for the International Institute for Strategic Studies, 2000).

three new members and implemented the enhancement of PFP, and the Membership Action Plan (MAP) launched at the Washington Summit in 1999, created coherent principles for enlarging the Alliance. NATO established explicit conditions for membership including active participation in PFP, MAP, and Allied operations, performing democratic political institutions, privatized economies, respect for human rights, and orderly foreign relations. Other standards were democratic control of the military and substantial interoperability and political compatibility with NATO.

To meet the civil-military criteria four conditions appear necessary:

■ *A clear division of authority between the president and government (prime minister and defense/interior minister).* This must be established by a written constitution or public law, designating who commands and controls the military, promotes officers in peacetime, holds emergency powers in a crisis, and has authority to declare war. Underlining these formalities must be evidence of respect and tolerance between the executive and legislative branches.

■ *Parliamentary oversight of the military through control of the defense budget.* This authority should include defense, security, and foreign affairs committees to provide minority and opposition parties with information and allow consultation, particularly



Raising Polish flag at
NATO headquarters,
March 1999.

■ *Restoration of military prestige, trustworthiness, accountability, and operational effectiveness.* Having emerged from the communist period when the military was controlled by the Soviet High Command through the Warsaw Pact and was often an instrument of oppression, post-communist civil communities must perceive the military as being under democratic control. In addition to institutional and constitutional checks and balances, general staffs must be accountable to civil officials. A legal framework and code of conduct for professional soldiers and conscripts that would allow soldiers to disobey illegal orders is also required. Finally, military training levels and equipment must also be sufficient to protect the state. This calls for adequate social support and a predictable stream of resources.

Making the Journey

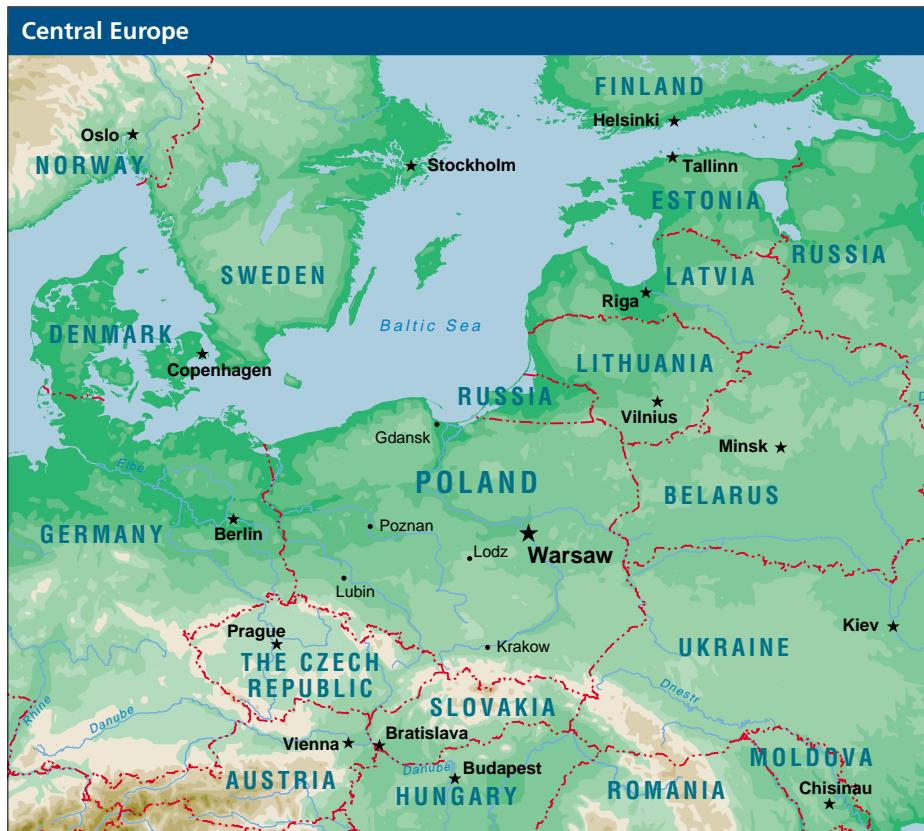
The transformation to a democratic state has been a continuous though fractious process of multi-stage development in Poland. It began in 1988 on the eve of the collapse of the Soviet empire. After a decade of unrest, the communist government reached an accommodation with the opposition. The official Polish United Worker's Party recognized pluralism for political and trade unions. In return, a powerful new office of president was established under Wojciech Jaruzelski, who quickly wrested control of the National Defense Council—together with both the defense and interior ministries—from the Communist Party and placed it under his own control. In April 1989 the council was further restructured from a supra-governmental agency to a state organ subordinate to parliament, further distancing the military from direct party control.

The overwhelming defeat of the Communist Party in the general parliamentary elections of June 1989 and choice of Tadeusz Mazowiecki as the first noncommunist prime minister stimulated further reforms. Parliament exerted greater authority after the elections, and reformers controlled a third of the upper house (Sejm) and senate. An ad hoc group of Solidarity leaders and members of parliament formed

on defense budgets and extraordinary commissions investigating security violations. Committees need staff expertise and sufficient information to support the review of defense programs and liaison with defense and interior ministries and to develop bipartisan consensus. Similarly, intelligence oversight committees should provide access to opposition parties.

■ *Peacetime government oversight of general staffs and commanders through civilian defense ministries.* Defense ministry management should include preparation of the defense budget, access to intelligence, involvement in strategic and defense planning to include force structure development, arms acquisitions, deployments, personnel development, and military promotions.

AP/Wide World Photos (Dusan Vranic)



oversight groups within the ministry of defense. Bronislaw Komorowski and Janusz Onyszkiewicz, Solidarity civilians, became deputy defense ministers and began to eliminate the Main Political Administration (a Communist organ of control) from the military. Civilians also took control of contact with other countries and international organizations, in part to ensure that Moscow did not exercise command of

Walesa chaired the defense council, providing reformers with de facto control of the military and police

Polish forces through the Warsaw Pact. Meanwhile, Piotr Kolodziejczyk, an independent-minded admiral, became defense minister and General Zdzislaw Stelmaszuk, who had not attended a Soviet staff college, became chief of the general staff.

Even as Jaruzelski's prestige fell after the elections, noncommunists assumed positions of authority in civilian and military institutions. Then,

with his resignation and call for new elections, the stage was set for further change. Votes cast in December 1990 brought Solidarity leader Lech Walesa to the presidency and the appointment of Jan Bielecki as the second noncommunist prime minister, initiating a new round of military reforms with power shifting from a partially communist parliament to the president. Walesa chaired the defense council, providing reformers with de facto control of the military and police. He also exercised oversight of the defense ministry through the National Security Bureau, responsible for developing military doctrine, conducting threat analyses, and drafting the reorganization of both the defense ministry and general staff.

As Walesa gained greater control, reform proved difficult to implement. Tensions between the communist-dominated Sejm on the one hand, and the senate and president on the other,

foiled efforts to draft a new constitution. Frustrated, Walesa pushed for parliamentary elections two and a half years early. Elections in October 1991 selected the nation's third consecutive noncommunist prime minister, Jan Olszewski, which presented another opportunity to revise the national security structure. As a result of these elections, executive and legislative institutions were fully democratic although glaring weaknesses remained: a heavily fragmented and weak coalition government and the absence of a constitution.

Debate over a constitution sparked a political showdown between parliament and president. Ambiguity in authority and differences in interpretation over command and control caused the downfall of the Olszewski government, including the first civilian defense minister, Jan Parys, who exacerbated the confrontation by alleging that Walesa had been planning contingencies to rule by martial law. A Sejm commission investigating the charges exonerated the president.

A new government under a non-communist prime minister, Hanna Suchocka, brought hope of cooperation among the parliament, ministry, and president. In October 1992, the new defense minister, Onyszkiewicz, implemented an interministerial commission on defense ministry reform. In addition, military courts and intelligence were subordinated to the civilian defense minister, who proposed further reform. The Onyszkiewicz initiatives encountered resistance, however. Attempts to fuse civilian and military budget and personnel activities and set up an independent department for managing infrastructure and acquisition were blocked by the general staff.

Ministry efforts were further limited by Walesa's appointment of General Tadeusz Wilecki as chief of the general staff. Wilecki continued to arrogate power by bringing his military district commanders under the general staff. As a result, that body effectively maintained autonomy by playing off civilian defense ministry oversight against the authority the generals garnered from presidential support. Thus four parties struggled for control of the military: parliament, presidency, defense ministry, and general staff.



Lech Wałęsa
with workers in
Gdansk, 1983.

the military, precipitating a constitutional crisis. Under the interim constitution the prime minister was required to consult with the president on selecting a defense minister. Wałęsa forced the reappointment of his old ally, Kolodziejczyk. The admiral immediately loosened control over the military. In November 1993 he reduced and consolidated the defense establishment and granted the general staff greater authority by transferring civilian departments back to the military, establishing new military directorates, and placing intelligence and counter-intelligence duties under the purview of senior officers.

Kolodziejczyk's initiatives were followed by the Drawsko affair, which threw fragile civil-military relations into further turmoil. At a September 1994 meeting of military cadres at Drawsko Pomorskie training grounds, Wilecki voiced support for Wałęsa's position to have the general staff function directly under the president rather than report to the defense ministry. The remarks drew parliamentary attention. A Sejm defense committee investigation revealed tensions among a general staff supporting direct presidential control, a parliament determined to play a supervisory role over the military, and a constitution that failed to distinguish a proper balance of power. The committee equivocated in its findings. Though it criticized the president for his behavior at Drawsko, it failed to react even after Wałęsa presented awards to Wilecki and other top military commanders after the incident. Drawsko and the Sejm report further undermined trust between parliament and president. Kolodziejczyk resigned, contributing to the Pawlak government's collapse.

The conflict between president and parliament reached crisis proportions. A civil-military quagmire resulted from not delineating the specific authorities of the president and defense ministry and from the inability of the Sejm to exercise effective oversight. It also reflected the failure of the civilian officials in the ministry to exercise control over senior officers on the general staff.

In November 1992 further constitutional reform offered an opportunity to clarify legislative and executive authority. It failed because of continued ambiguity. Lack of consensus was evident in seven drafts submitted to the constitutional commission. The defense committee of the Sejm, for example, opposed presidential oversight of a national guard. There were also diverse views on the role of the executive in appointing ministers of defense, interior,

and foreign affairs. Inability to compromise blocked further progress.

Elections were again crucial to transformation. The Sejm and senate contests of September 1993 were a bitter setback for those political parties which emerged from the Solidarity movement, with the return of communists who took control of parliament and formed a coalition government. The appointment of Waldemar Pawlak as prime minister led to a renewed battle with the president for control of

AP/Wide World Photos



Celebrating Polish army day at Banja Vrucila, Bosnia.

982 Signal Company, Combat Camera [James V. Doven, Jr.]

Elections intervened to shape the defense revolution. After the inauguration of Aleksander Kwasniewski in December 1995 and the formation of a socialist government under Prime Min-

Poland struggled for a consensus on the organization of a modern defense establishment

ister Włodzimierz Cimoszewicz, parliament searched for a legislative solution to the problems of civil-military control. The result was the enactment of the Law on the Office of the Defense Minister in February 1996, which added

a deputy defense minister to deal with the budget and increased civilian oversight. In addition, the chief of general staff formally became a deputy minister. These changes wrested control from the general staff and subordinated generals to the defense ministry.

The September 1997 return of the Solidarity-led government led by Jerzy Buzek and a new form of cohabitation with a socialist president under a new constitution redefined the powers of the president and administration. Both branches tackled the issue of military

organization and control in a bipartisan manner. Land Forces Command was established with military districts subordinated to it rather than the general staff. In 1998 the general staff was restructured into a joint staff. With these final changes, Poland institutionalized civil control over the military prior to acceding to NATO.

Unfinished Revolution

Poland struggled for a consensus on the organization of a modern defense establishment. The demise of the Communist Party created a void. The control of the armed forces became the centerpiece of a constitutional contest for power. The way the general staff played the president against the prime and defense ministers brought the military an independence not found elsewhere in Central Europe. Thus the general staff gained enormous influence vis-à-vis civilian institutions. This independence was facilitated by Walesa's desire to finally seize control from the communists and by instability at the top levels of the defense ministry.

Since the passage of the Law on the Office of the Defense Minister and a new constitution, efforts at solidifying ministerial management responsibility and oversight of the general staff can be seen as relatively successful. Yet tension between the president and government remain. Current problems result from the continued inability to delimit presidential authority in the area of defense affairs.

The capacity of the Sejm for oversight has shown remarkable improvement, but limitations persist. Since its beginnings in 1989-90, the Sejm defense committee has only slowly developed an expert staff. In particular, its chairman publicly recognized shortfalls in supervising military intelligence. He also acknowledged that although the Supreme Chamber of Control has slightly improved its ability to monitor the defense budget, it will take years before the Sejm can develop the methods employed in advanced democracies.

Despite limited support mechanisms, legislators have exerted greater influence. Parliament has exercised some control through constrained budgets. In addition, the Sejm has



NATO training at Camp White Eagle, Kosovo.

982 Signal Company Combat Camera (Jason Heisch)

demonstrated limited supervision over military administration. It began with the Defense Reform Law in 1996 and rules on military rotation and term limits on general staff assignments and army reform. The increased oversight also has been evident in questions on acquisition (such as helicopters, fighter aircraft, and artillery) as well as personnel policy and other reforms.

Despite initial limits, the defense ministry has shown significant structural and functional differentiation since the interministerial commission. The reform concept and subsequent actions appear to hit the mark. Efforts to empower the ministry by providing accountability, subordinating and limiting the functions of the general staff to civilian authority, and reforming the armed forces through budgetary measures and acquisition practices have been appropriate objectives.

In addition, the nation has tackled the issue of preparedness. Personnel have been cut and readiness problems have been evident in all services as well as the Polish element of Implementation Force (IFOR)/Stabilization Force (SFOR) in Bosnia. Contrasted with other countries in Central Europe, however, a defense budget increase in

1995 reversed a slide that had begun in 1986. While it represents a commitment of 2.08 percent of the gross domestic product in 2000, there is an apparent—albeit unrealized promise—to increase this level of spending to 3 percent. Moreover, compared with Hungarians and Czechs, Poles hold the armed forces in high esteem. Finally, Poland has developed institutions for intergovernmental security planning with a capacity to prioritize national objectives.

The Way Ahead

As an enlarged NATO becomes a reality, Poland and other new members must define their military role in European security. Their decisions are particularly vital in light of criteria often cited by the current members of the Alliance in justifying enlargement, which include promoting stability through institutionalizing common values, enhancing core tasks through strengthened territorial defense and contributions to rapid reaction forces, and developing capabilities for out-of-area operations.

NATO will soon be able to measure these objectives against evolving realities among new members. The extent to which these newcomers realize their potentialities will greatly influence the future of the Alliance.

Each new member faces three challenges. The first is military integration. If they succeed in this effort the Alliance will be strengthened and poised for further enlargement. But if these new members fail to meet force goal targets, and if NATO concludes that the first enlargement tranche has added consumers rather than producers, the commitment to enlargement could be undercut and regional security could be compromised.

Second, integration is not so much an issue of modernization as it is building an institution that is widely supported by society and government, and whose forces can fulfill Alliance tasks such as territorial defense, rapid reaction, and meeting out-of-area commitments.

Third, even though PFP has been critical in developing a sense of regional stability, NATO must not focus on new members. Moreover, the new members—beyond meeting force goal targets and voicing support for the partnership—must devote resources to the program.

As a former partner, Poland is particularly helpful in dealing with such challenges. It can help other nations more effectively implement PFP. Partners should note the Polish experience in establishing a solid foundation for civil-military relations.

Fair and open elections, compromise and restraint among competing parties, constitutional experimentation and reform, and transparency in the political process all contributed to forging new state structures for civil-military relations in Poland. By combining these elements with sensible defense reorganization and a modicum of material and popular support, this new member of the Alliance has demonstrated that the NATO model is viable.

JFQ

Creating the South African National Defence Force

Combined exercise off African coast.



By JAMES A. HIGGS

The creation of the South African National Defence Force (SANDF) is arguably one of the success stories in the history of the Republic of South Africa. But questions persist about its role, budgetary allocations, personnel structures, and equipment procurement. Over the last decade, SANDF has had to deal with radical downsizing and restructuring like the militaries of many other nations. It also had to adapt to a domestic revolution that brought an end to apartheid. The demands placed on the armed forces ranged from integrating tens of thousands of members of regular and guerrilla formations under democratic control to participating in peace operations.

Establishing a new force is proving an immense undertaking. First, the military must develop a shared institutional culture that is both acceptable to diverse ethnic backgrounds and generates the esprit necessary for unit cohesion. Second, it must recruit, train, and deploy this force as defense competes with other government sectors for budgetary resources. Third, it must build legitimacy among those mistreated by the security forces under the previous regime.

Transforming a Military

During the early 1990s the Sub-council on Foreign Affairs of the Transitional Executive Council developed an understanding of the factors that would influence the future political and security environment. It recognized that close links would exist between regional and national interests

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Courtesy of SALUT, South African Department of Defence

Republic of South Africa

Defense Budget: Estimated at \$1.9 billion for 2000; the gross domestic product in 1999 was \$128 billion (\$5,800 per capita).

Manpower: With a population of 40,300,000, South Africa has a total of 6,049,000 men between 18 and 32 years of age. Active military strength is 63,389. Reserve forces number 87,392—army, 85,228; navy, 1,070; air force, 442; and military health service, 652.

Armed Forces: South Africa has an army of 42,490 soldiers and 168 main battle tanks (128 in storage); a navy with 5,190 sailors and 2 submarines, 9 patrol/coastal craft, and 8 mine warfare vessels; an air force with 9,640 airmen and 87 combat aircraft; and medical health service of 5,550.

Source: International Institute for Strategic Studies, *The Military Balance, 2000-2001* (Oxford: Oxford University Press for the International Institute for Strategic Studies, 2000).

which could be threatened by deteriorating relations stemming from refugee migration, drug trafficking, arms transfers, and cross-border ethnic, nationalist, and extremist activities. Following this analysis measures were proposed "to prevent conflict, the monitoring of events, becoming involved in preventive diplomacy, and ways to influence the emergence of a constructive new order on the continent in a positive and significant manner."

South Africa also drafted an interim constitution outlining six functions for the defense force: services in protection of the nation; international obligations; preservation of life, health, and property; provision of essential services; upholding the law; and social upliftment.

A white paper released in 1996, *Defence in a Democracy*, further specified requirements for the future. Among other concerns it addressed the strategic situation in which South Africa must operate, human resources, and civil-military relations. It also noted that South Africa

is no longer isolated internationally. It has been welcomed into many international organizations, most importantly the... [United Nations,] the [Organization of African Unity], and the Southern Africa Development Community. South Africa is in fact expected to play an active role in these forums, especially with regard to



Secretary Cohen
in Cape Town.

DOD (Helene C. Sikkel)

peace and security in Africa and Southern Africa in particular. . . . South Africa does not now, and will not in the future have aggressive intentions towards any state. It is not confronted by any immediate conventional military threat, and does anticipate external military aggression in the short to medium term (+/- five years). . . . [The] size, design, structure, and budget of the SANDF will therefore be determined by its primary function.

This vision for the armed forces brought with it new fiscal realities. The fact that the defense budget as a per-

the former military was closely identified with the policy of apartheid

cent of gross domestic product fell from 4.7 in 1988 to 1.6 in 1996, for example, meant that spending was cut by almost two-thirds. Some might regard this adjustment as a fitting price to extract from an institution that formerly held a privileged position and

commanded substantial resources. On the other hand, fiscal constraints introduced by such a decline make the expensive process of reform particularly demanding.

As a high profile institution on which state survival may depend, the armed forces have a tremendous responsibility. It is well that reform is

underway given that the process of transformation may take decades.

The Ghost of Apartheid

The former military was closely identified with the policy of apartheid. The creation of SANDF has thus been a most delicately balanced process of institution-building and one that in some ways represents the task confronting the whole country.

This balancing act is illustrated by two potentially conflicting imperatives for change. First, social needs for greater legitimacy required combining eight statutory and nonstatutory forces, transforming an institutional culture from an apartheid state agency to a more transparent, accountable, and representative force, and cutting defense spending in accord with domestic priorities for reconstruction and development. Primarily focused on personnel issues, this process has concentrated on integrating a regular, white-led, high-technology conventional force with irregular, guerrilla, and predominantly black revolutionary forces. Furthermore, the importance of this process has made it necessary to conduct the transformation quickly.

Participating in peace operations.



Courtesy of SALUT, South African Department of Defence

One major structural difficulty confronting SANDF was the shift in budget allocations from what might be characterized as typical of industrialized military in 1990 to an unbalanced distribution by the end of the decade. The proportion of resources devoted to personnel tripled while that allocated to the capital costs of equipment replacement fell by two-thirds.

The rationale for reallocating resources provided by political and social imperatives for integration will be examined later. But such a policy has a severe impact on the capabilities of the armed forces to fulfil their constitutional responsibilities. The effect on the navy is that the entire fleet will reach obsolescence simultaneously. To rectify this situation, a ministerial plan has been issued to restore the balance of spending for operational and personnel outlays, in the process reducing SANDF to a total level of about 70,000.

Underlying this effort are needs for a structure, lines of command, constitutional relations, and management of civil supremacy over the military that are the basis of good democratic practice and constitutional government. Democracy was a prerequisite for the establishment of SANDF.

Obstacles to Integration

The ethos of the South African Defence Force derived from a variety of sources: Afrikaner culture, the irregular warfare experience of the Boers, African cultures within the ranks, the regular force ethos of the British military, and colonial experience. Notwithstanding the odious activities of some elements of the armed forces between 1985 and 1993, examining the old ethos can inform the current situation surrounding the integration process.

The old ethos is traced to the formation of the Union Defence Force following the British victory in the Anglo-Boer war of 1898–1902. It drew on both British and Boer military traditions. The Boers stressed hierarchy, respect for authority, team spirit, Christian values, self-reliance, and a capacity to prevail against the odds. This ethos required that in times of emergency citizens must take up arms and commit horses, servants, and their lives to defending the nation. That spirit was institutionalized in the commando system.

During the Cold War many members of the armed forces considered communism as anti-Christian, partly because of teachings propagated by the Dutch Reform Church, whose dicta were accepted uncritically by

Afrikaners. Although such beliefs were confined neither to Afrikaners nor South Africans, they built a cohesive esprit as the military closed ranks to deal with a perceived threat. The culmination of this perception was adoption of the idea of *total onslaught* and the state response—*total strategy*.

The old military followed the British model: a regimen enforced without qualification and symbols of discipline such as drill and ceremony, dress regulations, and good timekeeping. While these traditions still prevail in Britain, efforts made over the last thirty years ensure that discipline is not the principal motivation for obeying orders. Effective leadership of a more informed, socially aware soldiery has increasingly been introduced by communicating reasons underlying orders. As a result there was a major divergence between British and Afrikaner military cultures. Part of the South African attitude was linked to the conscript-based forces found in the United Kingdom of the 1950s more than to the highly technological all-volunteer force in Britain today.

The origins of this military ethos were not exclusively European. Though the leadership was undeniably dominated by whites, black Africans constituted a large segment of the rank and file. There were Zulu battalions and Bushman units as well as those members who predominantly spoke Afrikaans. Maintaining a language distinction was likely derived from the British, who believed that troops fight hardest when they operate as an enlarged family, and this notion is most easily generated among those of common ethnic stock.

Nonstatutory Forces

The ethos of nonstatutory forces (NSF) is derived from their irregular nature, the anti-apartheid revolutionary struggle in which they were engaged, and the stage of history in which they became politically active. Also significant were the ideological basis of their struggle, the extent of their training in foreign states, and their cultural origins.

Considerable diversity existed in NSF, with generational differences distinguishing those who became active

SANDF Officer Corps: Racial Composition												
Grade	Army				Navy				Air Force			
	African	Asian	Mixed	White	African	Asian	Mixed	White	African	Asian	Mixed	White
G0s/F0s												
010	1	0	0	0	0	0	0	0	0	0	0	0
09	4	0	0	1	0	0	0	2	0	0	0	1
08	11	0	0	11	1	0	0	5	1	0	0	6
07	29	0	2	49	2	0	1	20	3	0	0	23
Field/Company												
06	52	0	4	258	6	1	0	94	10	0	0	147
05	167	0	34	495	2	5	6	125	40	0	3	352
04	279	2	80	532	24	2	8	96	64	1	4	244
03	479	4	82	705	7	3	6	67	91	4	14	299

Source: South African National Defence Force.

in the early 1960s, mid-1970s, mid-1980s, and 1990s. Whether their political radicalism truly increased with each generation is unclear, but the irregular nature of their military service gave them an entirely different background than their conventional force contemporaries. Indeed many entered the nonstatutory forces during the waning months of the struggle with little or no training and were disdained as *klipgoeier* (stonethrowers).

many entered nonstatutory forces during the waning months of the struggle with little or no training

Whether it was a result of revolutionary fervor or cultural inheritance, many of the older NSF members felt that young recruits were intolerant of authority in general and state agencies such as the police and armed forces in particular.

The ideological basis of the struggle often included a strong element of Marxism, which was reinforced by training in communist countries. Twenty-three nations hosted NSF training, from nearby Lesotho to the Soviet Union and Cuba. The diversity of experiences gathered was both an advantage in terms of skills and a challenge when it came to standardized procedures.

The commissar or political officer was an integral part of the force in the struggle against apartheid and there is considerable evidence that it is affecting the command ethos of SANDF. This issue provokes controversy between proponents of the Western and communist systems. General Andrew Mosondo has pointed out that the commissar has undermined the authority of commanders since Marxist-Leninists inaugurated the concept of party in the army. The proper role of a commissar is acting as second in command, knowing troop attitudes, being accessible to members of the unit, and giving advice to the commander.

But military professionals remain suspicious of this practice of advising the chain of command in matters such as morale.

Despite these concerns, one retired general has still suggested that there is potential for applying the commissar system to African troops. He was shocked to accompany a general on unit inspections and hear the three-star cross-examined by private soldiers on his decisions and even told that one was unsound. But on reflection he found that the practice was not only useful for communication up the chain but also a safety valve for personnel to let off steam.

The struggle against apartheid sensitized many people to race as a political issue. Under such circumstances

the African National Congress had to avoid reverse racism, whereby whites in general rather than the regime were cast as enemies. There was considerable success toward this goal, partly because of the rhetorical skills of Nelson Mandela and the utilization of whites within the organization and subsequently in government. Attitudes harbored toward whites by *Umkhonto we Sizwe* (MK), the military wing of the African National Congress, and Azanian People's Liberation Army (APLA), the military wing of the Pan-Africanist Congress, would be influential in their approach to integration into a force undergoing transformation but dominated by members of the old military.

The Induction Process

The administrative induction of the former NSF components is a potent symbol of the art of the possible. If the individuals who had opposed each other with force could reconcile themselves, virtually anything is possible in the rest of society. Even before the elections of 1994, planning for SANDF was well under way. The interim constitution provided for future armed forces through the Transitional Executive Council (TEC) and Subcouncil on Defence. In this way various political parties and their armed wings would have confidence in the conduct of the military during the election and some sense of what would happen afterwards.



The subcouncil drew its members from the African National Congress, government, and National Party in the person of the deputy minister of defence. The Pan-Africanist Congress (PAC) was not represented because it was not party to TEC, having rejected the idea of nonviolence. This situation would later cause considerable administrative difficulty.

The Joint Military Coordinating Council (JMCC) was established by TEC and reported to the Subcouncil on Defence. The chairmanship rotated and participants came from all major political factions. JMCC formed six workgroups: personnel, intelligence, operations, logistics, finance, and

other. They were dominated on the military side by ranking officers from the statutory forces because of their technical expertise, and on the NSF side by MK because of its political experience. The council tasked workgroups and required that results be delivered every three or four weeks. The groups would produce a proposal about a particular problem and adjourn, then individuals would report the consensus achieved to the principals of their respective organizations. The principals would often disagree with decisions taken by junior colleagues, but workgroups were not allowed to change their positions. When groups presented views to the council, various representatives would at least be forewarned of agenda items. JMCC would then decide whether to accept, amend, or reject workgroup proposals. It became the task of the chairman to present the conclusions to the Subcouncil on Defence.

The diversity of views in JMCC led to difficulty in reaching decisions at the early stage. The process was described as utterly frustrating by one participant because so much work went into achieving consensus in workgroups only to have issues reopened by the council. But this layered process also had the advantage of binding individuals from different origins with divergent views.

One example was the appointment of the British Military Assistance and Training Team. The decision was made to select a neutral body to monitor implementation of council decisions. JMCC decided on foreign help and the suggestion was made to the Subcouncil on Defence to choose a mix of representatives from both NATO and African states. The subcouncil accepted the proposal for overseas assistance but rejected the idea of a mixed team as too cumbersome. In the event the United Kingdom emerged as an acceptable candidate to the statutory force side because it was a Western power and to NSF members because of the favorable impression that MK members formed of British efforts in the front-line states during the struggle.

A certified personnel register (CPR) was established as one basis of negotiation for the implementation of



Providing medical assistance.

Courtesy of SALU/T, South African Department of Defense

the integration process. Once on the register the personnel would eventually become members of the new force. The element of compulsory conscription might explain in part why 14,000 on the register declined to report to the assembly points.

Integration required assessing individuals for placement, including their rank

Inevitably NSF failed to keep adequate files, which made devising CPR a painstaking process. For instance, individuals often had a *nomme de guerre* as well as a given name with different spellings. Thus a person could have multiple registrations. Some individuals had one or more ID numbers while others had none. Because CPR was computer based, it would not accept entries without a number, which caused delay and anguish.

The induction process began even before the 1994 elections, with the military merging with forces from nominally independent homelands—Transkei, Bophuthatswana, Venda, and Ciskei—and armed wings of the Pan-Africanist Congress and African

National Congress. The success of Mangosuthu Buthelezi in including the Inkatha Freedom Party in the elections also resulted in the induction of an element of the KwaZulu Self Protection Forces.

Integration required assessing individuals for placement, including their rank. Paper qualifications normally would be the basis of an assessment, but NSF claimed with justification that such an exercise would be biased in favor of the statutory forces because the opportunity to administer exams was limited during the guerrilla campaign.

Military medics and MK psychologists debated the virtues of various psychometric tests to determine the potential of individuals to reach the standard necessary for entry, either into the ranks or as officers. Eventually the British team produced a test acceptable to all parties. The challenge then became persuading personnel that it was not an attempt to exclude former NSF members.

Demobilization and Integration

The interim constitution of 1993 allowed all MK and APLA members on the register to enter SANDF under certain conditions. For those who were deemed unhealthy, uninterested, or too old, a law was enacted in December 1996 which authorized demobilization benefits.

A racial shift took place during the first three years. The African cohort increased from a third of the old military to a half of SANDF. White representation dropped from just under a half to less than a third, while Asians remained at around 1 percent and so-called coloured personnel to less than 12 percent.

Fewer than half of this force are drawn from the former military. SANDF personnel with no previous affiliation are joining at a recruitment rate of roughly 1,850 per year. Personnel with experience only in SANDF are projected to outnumber former MK members by 2001.

Such a complex process inevitably encountered difficulties, especially when induction meant entry into an Afrikaner-led organization. An early

issue arose when MK advisers began proposing ranks for their personnel. It should not be surprising that their criteria differed from the formal qualifications of the statutory forces. For example, MK might rank an individual as a lieutenant colonel because of his standing in the organization while the statutory forces might assess his experience as that of a lieutenant—the difference between commanding a platoon of thirty soldiers and a unit of six hundred. In compromise, an officer might be given the rank of major, but bridging training would be necessary to make him effective in his new position.

Language also presents a range of training, fairness, and leadership issues. Some stem from lack of formal education while others are attributed to language difficulties, even though SANDF officers have referred to the latter explanation as an attempt to cover failure in training. The question of language is not confined to the former NSF since some retraining of statutory force officers was required to be conducted in English. This practice has been an obstacle for those Afrikaner officers whose spoken English is less fluent than their ability to comprehend. In concert with the other issues and with continued allegations of racism within the ranks, the debate over the importance of language proficiency suggests that much work remains.

The transformation of the South African military has been a huge and unprecedented task. It will be widely studied by those interested in fundamentally changing the ethos, composition, and purpose of military institutions.

JFQ



Formation at Tres Esquinas in coca-growing Amazonian lowlands.

Colombia

Civil-Military Relations in the Midst of War

By JOHN T. FISHEL

Civil-military relations deal not only with who makes decisions about the use of force but what is decided. Any discussion of civil-military relations must address how the military relates to elements of civil society, including insurgents, narcotics traffickers and other criminals, paramilitary militias, and

nongovernmental organizations, especially those groups focused on human rights. In this context, assessing civil-military relations in Colombia requires appreciation of several factors: a long-standing democratic tradition, the evolution of the defense sector since the Cold War, and the efforts by the armed forces to stabilize civil-military relations in a war-torn society.

Praetorianism

Unlike most countries of Latin America, Colombia has not been significantly involved with praetorian rule

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Republica de Colombia

Defense Budget: Estimated at \$2 billion for 2000; the gross domestic product in 1999 was \$77 billion (\$5,800 per capita).

Manpower: With a population of 42,400,000, Colombia has a total of 5,195,000 men between 18 and 32 years of age. Active military strength is 153,000. Reserve forces number 60,700—army, 54,700; navy, 4,800; and air force, 1,200.

Armed Forces: Colombia has an army of 130,000 soldiers and 30 light tanks (in storage); a navy with 15,000 sailors (including coastguardsmen) and 4 submarines, 4 surface combatants, 27 patrol/coastal craft, a force of 8,500 marines, and naval aviation with 100 personnel; an air force with 8,000 members and 72 combat aircraft; and a national police force with 95,000 personnel.

Source: International Institute for Strategic Studies, *The Military Balance, 2000–2001* (Oxford: Oxford University Press for the International Institute for Strategic Studies, 2000).

despite its tumultuous early history. The nation was wracked by civil wars between partisans of the Liberal and Conservative parties in the 19th century, generally without participation by its small professional army. On the one occasion in which the military took sides, the reaction almost led to its disappearance. Not until after the War of the Thousand Days (1899–1902) and the long peace that followed was a professional force firmly established.

During the period of peace from 1902 to 1948 the army was generally not considered to be a political instrument. Only under the presidency of Alfonso Lopez (1934–38) did significant civil-military conflict surface. A Liberal, Lopez was suspicious of the Conservative orientation of most of the officer corps. He began intervening in promotions, seeking officers sympathetic to his ideas on social reform. Nevertheless, as one author noted, "only one minor conspiracy to depose Lopez surfaced in the military (1936)...despite his repeated attacks on the armed forces."¹ Another more serious coup in 1944 attempted to overthrow Lopez during his second term but it also failed. No further coups were attempted until the civil



AP/Wide World Photos (Ariana Cubillos)

war known as *La Violencia* effectively destroyed the elite political balance between Liberals and Conservatives in place since 1902.

La Violencia began as a street riot in Bogota (known as *Bogotazo*) that erupted in the wake of the assassination in 1948 of Liberal Party leader and presidential candidate Jorge Eliecer Gaitan. Rural violence, which had begun as early as 1946, raged out of control in much of the nation after *Bogotazo*. From 1948 to 1950 military officers replaced Liberal cabinet officers who had left the coalition government as a result of *La Violencia*. They cooperated with the radical Conservative president in closing the Liberal-dominated congress and supported the uncontested election of 1950 that led to the Conservative dictatorship of President Laureano Gomez.

The violence, government-ordered repression, and divisions within the Conservative Party brought the army leadership, especially its popular commander, General Gustavo Rojas Pinilla,

into conflict with Gomez. The political crisis erupted in June 1953 when Gomez was ousted by Pinilla, who assumed the presidency with the backing of moderate elements within the Conservative Party. A century of military obedience to civilian authority ended.

By offering amnesty to any guerrilla who would disarm, the new president initially held out a real incentive to end the violence. He also pledged to conduct a nonpartisan administration,

which provided an added inducement to return to a peaceful society. Coupled with war weariness these steps resulted in reduced violence until 1956. Then the economy, which had been quite vigorous because of high coffee prices, took a downturn as the coffee market collapsed. By then it was also apparent that the general, aside from being partisan, was building a political organization in the manner of Juan Peron

of Argentina. Thus violence rose again and the public was increasingly disaffected by authoritarian rule. When the president tampered with the electoral process in 1957, a military junta deposed him. The junta, in turn, was succeeded by the National Front governing arrangement, which resulted in power sharing between the Liberals and Conservatives until 1974. Since that time there has been power alternation in generally free and fair elections. There has been no threat of a military coup since 1958. As a recent U.S. defense attaché observed, the military is apolitical.

*Its members avoid interfering in internal domestic politics to a degree not witnessed in many other Latin American countries. This is an admirable fact: I've served in some countries where the U.S. embassy was always on a "coup watch".... Happily, that is not something I've had to watch closely in Colombia because the chances of a coup there are extremely remote.*²



Civil-Military Relations

In spite of 52 years of civil war that began with *La Violencia*, the command, control, and organization of the Colombian armed forces have continuously evolved in a direction that supports the development of democratic civil-military relations.

One action of the Gomez government that led Pinilla to seize power was the politicization of the national police. This force was established during the presidency of Alfonso Lopez as a counterweight to the army but it took the conservative Gomez regime to make the police an agent of the party. One of the first acts of the Pinilla government was to move the national police from the Ministry of the Interior to the Ministry of Defense in an effort to depoliticize the force. The police remain under the latter ministry today, separate from the army but residing in the same ministry. But although depoliticization succeeded, the police have been militarized as a result of the insurgency and the fight against drugs. One civilian in the Ministry of Defense

has argued that they have become a second army.

While it may no longer be useful, integrating the police into the defense

integrating the police into the defense establishment has not had a discernible impact on civil-military relations

establishment has not had a discernible impact on the dynamic of civil-military relations. That issue relates to the way the government has organized the Ministry of Defense internally and with respect to the other parts of the executive branch. Colombia adopted a single defense ministry earlier than many Latin American countries. Moreover, early in the administration of President Cesar Gaviria (1990-94) the first civilian in the country's history was named minister of defense. Since then every minister has been a civilian.

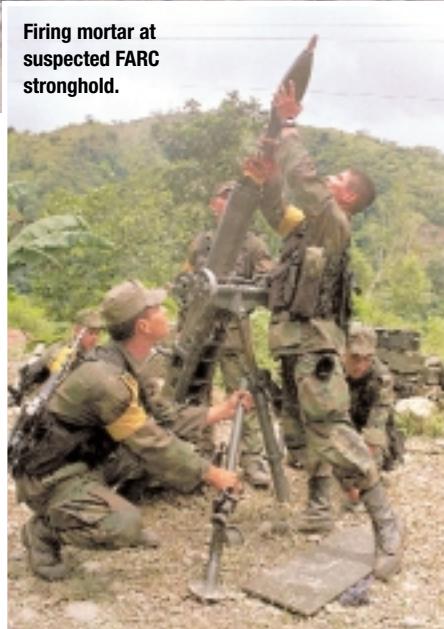
The minister serves in a chain of command that runs from the president, as commander in chief, through the defense minister to the armed forces commander. Indeed, this has been the case since the ministry was formed. Further, it is common today in 13 of the 18 countries

in Latin America, an increase reflecting a trend toward rationalization of defense organization.

Despite the positive development of having a civilian minister in the chain, implementation has suffered from the high turnover of ministers. For example, in the first two years of the Andres Pastrana presidency there were two ministers of defense, continuing a trend begun under Gaviria and his successor, Ernesto Samper. Short tenure coupled with inexperience has led to inconsistent and ineffective defense policy. Another development was the designation of a civilian vice minister with responsibility for day-to-day technical functions such as budget and



AP/Wide World Photos (Oswaldo Paez)



AP/Wide World Photos (Oswaldo Paez)

finance, infrastructure, and acquisition. At present, the vice minister is not in the chain of command, although this subject is now being debated, suggesting that his future role will be carefully delineated.

Colombia is also moving toward greater jointness. A joint staff located within the Ministry of Defense is subordinate to the minister. Moreover, the several joint commands include not only two or more services, but also the national police. The latter are most involved in insurgency and narcotics trafficking.

Since a civilian became defense minister, Colombia has developed a cadre of experienced civil servants to people the ministry. Some are former junior officers but most have never served in the military. Increasingly they are graduates of the Center for Hemispheric Defense Studies at the National

Defense University in Washington, which gives them a common frame of reference with members of the armed forces and National Planning Office, an executive agency responsible for the national budget, a role similar to that

of the Office of Management and Budget in the United States, though far more powerful.

These developments in civil-military relations in the executive branch are among the most democratic in the region. Civilians occupy key positions within the chain of command and also within the ministry as well as the office that allocates the national budget. Moreover, civilians in these positions are increasingly educated in the core competencies of defense and national security. Despite a high turnover in defense ministers, Colombia demonstrates the principles of democratic civil-military relations.

A Bloody Struggle

The current civil war, which began with *La Violencia* a half century ago, degenerated from a typical civil war between the two traditional parties

into political banditry, rebounding into a new political conflict with Marxist-Leninist guerrillas, then was transformed again into a conflict that is sometimes fought over politics and at others over narcotics.³ The present struggle has raised new issues.

Earlier, Colombia's conscript/cadre army allowed high school graduates who were drafted to serve their military obligation in noncombat assignments. This exemption was regarded as right and proper when the nation was at peace. But when the insurgency and narco war heated up in the 1980s the draft inequity became more and more apparent until it threatened civil-military relations. Legislation to remove the combat exemption was expected to be implemented in September 2000.

Another major problem arises from the conduct of counterinsurgency operations and the relationship between the armed forces and paramilitary militias that are combating the insurgents. Colombia is a historically violent country that has known only relatively brief

Colombia is a violent country that has known only brief periods of peace

periods of peace. Its civil wars have been exceptionally brutal, with each side committing atrocities. Thus it is hardly surprising that the current conflict is noted for its viciousness.

This conflict pits the state against two significant insurgent movements, the Revolutionary Armed Forces of Colombia—*Fuerzas Armadas Revolucionarias de Colombia* (FARC)—and the National Liberation Army—*Ejercito de Liberacion Nacional* (ELN)—as well as several paramilitary militias and narco-traffickers (who are allied with insurgents and militias) depending on the locale. In addition, the narcotraffickers have sought to corrupt state agencies to conduct their nefarious business without hindrance.

In fighting on multiple fronts the armed forces—and to a lesser extent the police—have had considerable operational autonomy. As two observers have concluded, “while civilian authority is alluded to within national



Naval patrol boats on Putumayo River.

AP/Wide World Photos (Lavier Galeano)

constitutions, it is not specified for each kind of military mission . . . legal provisions probably overstate the degree to which political leaders actually supervise military conduct.”⁴ According to the Colombian Commission of Jurists security forces were responsible for 54 percent

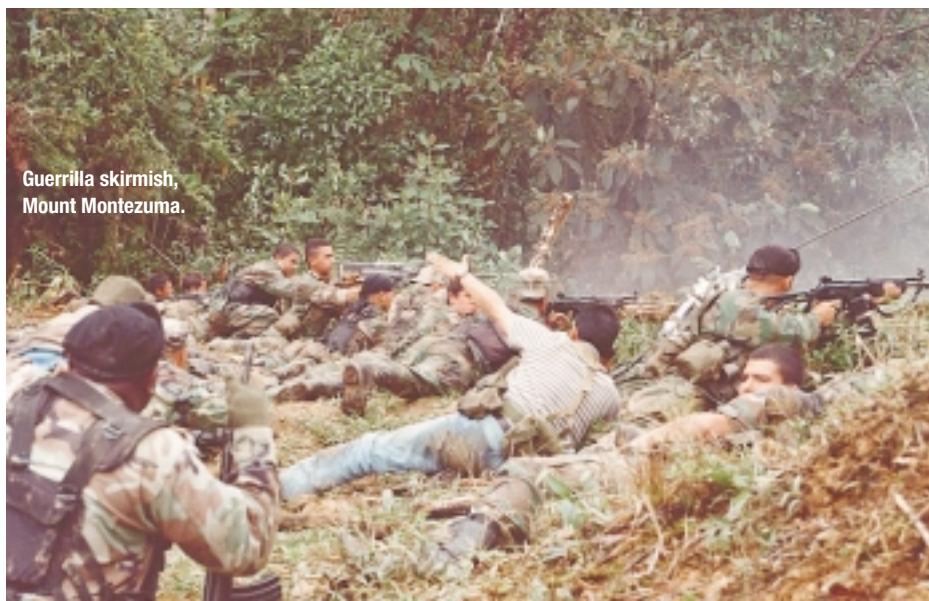
of political killings in 1993. This was reduced to 16 percent in 1995 and 18 percent in 1996. It declined still further to 7.5 percent in 1997 and 2.7 percent for the first nine months of 1998.⁵ Two preliminary conclusions can be drawn. First, tightening government supervision of security forces is resulting in greater respect for human rights. Second, security forces have some way to go before they conform to the principles of civil-military relations in a fully positive manner.

But the problem is more complex because of the relationship between the armed forces and paramilitaries. The latter are clearly responsible for a large number of political killings. In a mirror image to security forces, the Colombian Commission of Jurists stated that responsibility for such killings on the part of paramilitaries rose from 18 percent in 1993 to 46 percent in 1995 and 1996, and then to 69 percent in 1997 and to 76 percent in the first nine months of 1998. For comparison purposes, political killings

attributed to insurgents in the same years ranged from 21 to 38 percent.

The exact relationship between the armed forces and paramilitaries is unclear. According to a study by Human Rights Watch, “Implicated in extra-judicial executions, disappearances, torture, and threats, Mobile Brigade Two is reported to be closely linked to paramilitary groups operating in northern and central Colombia.”⁶ Nevertheless, there is evidence that some charges of human rights violations by the armed forces and their collusion with paramilitaries is based upon accounts which are dated or completely manufactured, originally reported in the European media, and then recycled in Colombia and/or the United States. Moreover, some allegations have appeared several times. As has been noted:

*Some Colombian authorities, such as General Fernando Tapia, Commanding General of the Armed Forces, and General Rosso Jose Serrano, Director of the National Police, profess to see no difference between the paramilitaries and the guerrillas, regarding each as a threat to state authority. Others, such as some military commanders, take a live and let live attitude. Some regard the paramilitaries as allies in the war against the insurgents.*⁷



The ambiguous if not ambivalent relationship between the armed forces and paramilitaries, coupled with alleged and actual human rights violations by security forces, makes the conduct of civil-military relations in Colombia problematic at best. The forces "need to fundamentally change the way they deal with their civilian population. They need to end—definitively—the human rights abuses which have marred their interaction with the civilian populace, remove the violators from military and civilian ranks, and prosecute in civilian courts those who should be charged with civil crimes and abuses."⁸ According to interviews much of this is taking place. The armed forces are working closely with the United Nations to address human rights issues within the law of war while General Tapias is seeking better communication on the part of the military with human rights groups.

With respect to impunity, many cases are being heard in civilian courts, and privileges that once excluded military members from prosecution are becoming a thing of the past. Despite the fact that jurisdiction over human rights violations has been passed to the civil justice system, some nongovernmental organizations argue that this is

a sham since so few officers have been convicted or even disciplined. The data, however, does not conceal the real progress made in the attitudes of the armed forces toward human rights in recent years. Thus part of the problem confronting Colombia is public perception, which each side seeks to manipulate in a conflict. Thus far, those opposing the military have been more successful, aided by its flawed human rights record.

There are still reasons for optimism. The Colombian armed forces have generally avoided praetorian ambitions unlike many Latin American militaries. The ministry is organized to enhance civilian decisionmaking authority, including the general orientation on employing forces. In addition, there will be a sizable increase in educated and trained civilian professionals within the Ministry of Defense and the office which controls the national budget.

Colombia faces a complicated civil war in which the performance of both the military and police has sometimes damaged civil-military relations. This has been manifest in human rights violations, dealings with violent paramilitary militias that abuse human rights, and the perception of impunity for offenses committed by the military.

Nonetheless, the armed forces have made strides in implementing policies to promote democratic institutions, even in the midst of war.

JFQ

NOTES

¹ J. Mark Ruhl, *Colombia: Armed Forces and Society* (Syracuse: Maxwell School of Citizenship and Public Affairs, Syracuse University, 1980), p. 23.

² William C. Spracher, "The Colombian Armed Forces and National Security," *Crisis? What Crisis? Security Issues in Colombia*, edited by James L. Zackrison (Washington: National Defense University, 1999), pp. 66–67.

³ This interpretation runs counter to the conventional wisdom which sees a break between the period 1948–57 and the birth of *Fuerzas Armadas Revolucionarias de Colombia* (FARC) in 1962. But it can be argued that the FARC leader, Manuel Marulanda (also known as Tiro Fijo), began his career as a Liberal guerrilla in 1948, was a Liberal bandit from about 1954 to 1962 when he joined FARC, and then rose to become its leader.

⁴ David Pion-Berlin and Craig Arceneaux, "Decision-Makers or Decision-Takers? Military Missions and Civilian Control in Democratic South America," *Armed Forces and Society*, vol. 26, no. 3 (Spring 2000), p. 420.

⁵ Gabriel Marcella and Donald Schulz, *Colombia's Three Wars: U.S. Strategy at the Crossroads* (Carlisle Barracks, Pa.: U.S. Army War College, Strategic Studies Institute, 1999).

⁶ Quoted in Patricia Bibes, "Colombia: The Military and the Narco-Conflict," *Low Intensity Conflict and Law Enforcement* (forthcoming).

⁷ Marcella and Schulz, *Colombia's Three Wars*, p. 14.

⁸ David Passage, *The United States and Colombia: Untying the Gordian Knot* (Carlisle Barracks, Pa.: U.S. Army War College, Strategic Studies Institute, 2000), p. 21.

Joint Vision 2020



**America's Military—
Preparing for
Tomorrow**

CJCS Vision . . .

Dedicated individuals and innovative organizations transforming the joint force for the 21st century to achieve full spectrum dominance:

Persuasive in peace

Decisive in war

Preeminent in any form of conflict

The U.S. military today is a force of superbly trained men and women who are ready to deliver victory for our Nation. In support of the objectives of our national security strategy, it is routinely employed to shape the international security environment and stands ready to respond across the full range of potential military operations. But the focus of this document is the third element of our strategic approach—the need to prepare now for an uncertain future.

Joint Vision 2020 builds upon and extends the conceptual template established by *Joint Vision 2010* to guide the continuing transformation of the Armed Forces. The primary purpose of those forces has been and will be to fight and win the Nation's wars. The overall goal of the transformation described in this document is the creation of a force that is dominant across the full spectrum of military operations—persuasive in peace, decisive in war, preeminent in any form of conflict.

In 2020, the Nation will face a wide range of interests, opportunities, and challenges and will require a military that can both win wars and contribute to peace. The global interests and responsibilities of the United States will endure, and there is no indication that threats to those interests and responsibilities, or to our allies, will

disappear. The strategic concepts of decisive force, power projection, overseas presence, and strategic agility will continue to govern our efforts to fulfill those responsibilities and meet the challenges of the future. This document describes the operational concepts necessary to do so.

If the Armed Forces are to be faster, more lethal, and more precise in 2020 than they are today, we must continue to invest in and develop new military capabilities. This vision describes the ongoing transformation to those new capabilities. As first explained in *Joint Vision 2010*, and dependent upon realizing the potential of the information revolution, today's capabilities for maneuver, strike, logistics, and protection will become dominant maneuver, precision engagement, focused logistics, and full dimensional protection.

The joint force, because of its flexibility and responsiveness, will remain the key to operational success in the future. The integration of core competencies provided by the individual services is essential to the joint team, and the employment of the capabilities of the total force (active, Reserve, National Guard, and civilian members) increases the options for the commander and complicates the choices of our opponents. To build the most effective force for 2020, we must be fully joint: intellectually, operationally, organizationally, doctrinally, and technically.

This vision is centered on the joint force in 2020. The date defines a general analytical focus rather than serving as a definitive estimate or deadline. The document does not describe counters to specific threats, nor does it enumerate weapon, communication, or other systems we will develop or purchase. Rather, its purpose is to describe in broad terms the human talent—the professional, well-trained, and ready force—and operational capabilities that will be required for the joint force to succeed across the full range of military operations and accomplish its mission in 2020 and beyond. In describing those capabilities, the vision provides a vector for the wide-ranging program of exercises and experimentation being conducted by the services and combatant commands and the continuing evolution of the joint force. Based on the joint vision implementation program, many capabilities will



U.S. Air Force (Val Gempis)

be operational well before 2020, while others will continue to be explored and developed through exercises and experimentation.

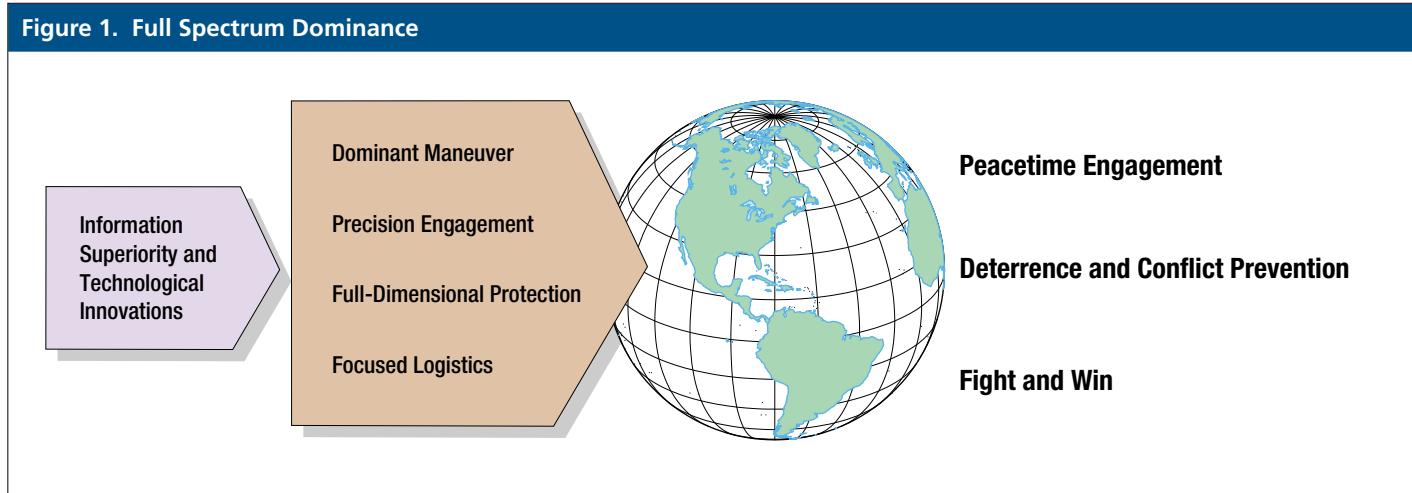
The overarching focus of this vision is full spectrum dominance—achieved through the interdependent application of dominant maneuver, precision engagement, focused logistics, and full dimensional protection. Attaining that goal requires the steady infusion of new technology and modernization and replacement of equipment. However, material superiority alone is not sufficient. Of greater importance is the development of doctrine, organizations, training and education, leaders, and people that effectively take advantage of the technology.

The evolution of these elements over the next two decades will be strongly influenced by two factors. First, the continued development and proliferation of information technologies will substantially change the conduct of military operations. These changes in the information environment make information superiority a key enabler of the transformation of the operational capabilities of the joint force and the evolution of joint command and control. Second, the Armed Forces will continue to rely on a capacity for intellectual and technical innovation. The pace of technological change, especially as it fuels changes in the strategic environment, will place a premium on our ability to foster innovation in our people and organizations across the entire range of joint operations. The overall vision of the capabilities we will require in 2020, as introduced above, rests on our assessment of the strategic context in which our forces will operate.

STRATEGIC CONTEXT

Three aspects of the world of 2020 have significant implications for the Armed Forces. First, the United States will continue to have global interests and be engaged with a variety of regional actors. Transportation, communications, and information technology will continue to evolve and foster expanded economic ties and awareness of international events. Our security and economic interests, as well as our political values, will provide the impetus for engagement with international partners. The joint force of 2020 must be prepared to win across the full range of military operations in any part of the world, to operate with multinational forces, and to coordinate military operations, as necessary, with government agencies and international organizations.

Figure 1. Full Spectrum Dominance





982d Signal Company (James V. Dowden, Jr.)

Second, potential adversaries will have access to the global commercial industrial base and much of the same technology as the U.S. military. We will not necessarily sustain a wide technological advantage over our adversaries in all areas. Increased availability of commercial satellites, digital communications, and the public Internet all give adversaries new capabilities at a relatively low cost. We should not expect opponents in 2020 to fight with strictly industrial age tools. Our advantage must therefore come from leaders, people, doctrine, organizations, and training that enable us to take advantage of technology to achieve superior warfighting effectiveness.

Third, we should expect potential adversaries to adapt as our capabilities evolve. We have superior conventional warfighting capabilities and effective nuclear deterrence today, but this favorable military balance is not static. In the face of such strong capabilities, the appeal of asymmetric approaches and the focus on the development of niche capabilities will increase. By developing and using approaches that avoid U.S. strengths and exploit potential vulnerabilities using significantly different methods of operation, adversaries will attempt to create conditions that effectively delay, deter, or counter the application of U.S. military capabilities.

The potential of such asymmetric approaches is perhaps the most serious danger the United States faces in the immediate future—and this danger includes long-range ballistic missiles and other direct threats to U.S. citizens and territory. The asymmetric methods and objectives of an adversary are often far more important than the relative technological imbalance, and the psychological impact of an attack might far outweigh the actual physical damage inflicted. An adversary may pursue an asymmetric advantage on the tactical, operational, or strategic level by identifying key vulnerabilities and devising asymmetric concepts and capabilities to strike or exploit them. To complicate matters, our adversaries may pursue a combination of asymmetries, or the United States may face a number of adversaries who, in combination, create an asymmetric threat. These asymmetric threats are dynamic and subject to change, and the Armed Forces must maintain the capabilities necessary to deter, defend against, and defeat any adversary who chooses such an approach. To meet the challenges of the strategic environment in 2020, the joint force must be able to achieve full spectrum dominance.

FULL SPECTRUM DOMINANCE

The ultimate goal of our military force is to accomplish the objectives directed by the National Command Authorities. For the joint force of the future, this goal will be achieved through full spectrum dominance—the ability of U.S. forces, operating unilaterally or in combination with multinational and interagency partners, to defeat any adversary and control any situation across the full range of military operations.

The full range of operations includes maintaining a posture of strategic deterrence. It includes theater engagement and presence activities. It includes conflict involving employment of strategic forces and weapons of mass destruction, major theater wars, regional conflicts, and smaller-scale contingencies. It also includes those ambiguous situations residing between peace and war, such as peacekeeping and peace enforcement operations, as well as noncombat humanitarian relief operations and support to domestic authorities.

The label *full spectrum dominance* implies that U.S. forces are able to conduct prompt, sustained, and synchronized operations with combinations of forces tailored to specific situations and with access to and freedom to operate in all domains—land, sea, air, space, and information. Additionally, given the global nature of our interests and obligations, the United States must maintain its

overseas presence forces and the ability to rapidly project power worldwide in order to achieve full spectrum dominance.

Achieving full spectrum dominance means the joint force will fulfill its primary purpose—victory in war—as well as achieving success across the full range of operations, but it does not mean that we will win without cost or difficulty. Conflict results in casualties despite our best efforts to minimize them and will continue to do so when the force has achieved full spectrum dominance. Additionally, friction is inherent in military operations. The joint force of 2020 will seek to create a “frictional imbalance” in its favor by using the capabilities envisioned in this document, but the fundamental sources of friction cannot be eliminated. We will win—but we should not expect war in the future to be either easy or bloodless.

The requirement for global operations, the ability to counter adversaries who possess weapons of mass destruction, and the need to shape ambiguous situations at the low end of the range of operations will present special challenges en route to achieving full spectrum dominance. Therefore, the process of creating the joint force of the future must be flexible—to react to changes in the strategic environment and the adaptations of potential enemies, to take advantage of new technologies, and to account for variations in the pace of change. The source of that flexibility is the synergy of the core competencies of the individual services, integrated into the joint team. These challenges will require a total force composed of well-educated, motivated, and competent people who can adapt to the many demands of future joint missions. The transformation of the joint force to reach full spectrum dominance rests upon information superiority as a key enabler and our capacity for innovation.

Figure 2. Range of Military Operations

Range of Military Operations			
combat		noncombat	
Military Operation	War	Military Operations Other Than War	
General U.S. Goals	Fight and Win	Deter War and Resolve Conflict	Promote Peace and Support U.S. Authorities
Examples	Large Scale Combat Operations Attack/Defend/Blockade	Peace Enforcement Counterterrorism Show of Force/Raid/Strike Peacekeeping/NEO Nuclear Assistance Counterinsurgency	Freedom of Navigation Counterdrug Humanitarian Assistance Protection of Shipping U.S. Civil Support

Information Superiority

Information, information processing, and communications networks are at the core of every military activity. Throughout history, military leaders have regarded information superiority as a key enabler of victory. However, the ongoing information revolution is creating not only a quantitative, but a qualitative change in the information environment that by 2020 will result in profound changes in the conduct of military operations. In fact, advances in information capabilities are proceeding so rapidly that there is a risk of outstripping our ability to capture ideas, formulate operational concepts, and develop the capacity to assess results. While the goal of achieving information superiority will not

change, the nature, scope, and rules of the quest are changing radically.

The qualitative change in the information environment extends the conceptual underpinnings of information superiority beyond the mere accumulation of more, or even better, information. The word *superiority* implies a state or condition of imbalance in one's favor. Information superiority is transitory in nature and must be created and sustained by the joint force through the conduct of information operations. However, the creation of information superiority is not an end in itself.

Information superiority provides the joint force a competitive advantage only when it is effectively translated into superior knowledge and decisions. The joint force must be able to take advantage of superior information converted to superior knowledge to achieve "decision superiority"—better decisions arrived at and implemented faster than an opponent can react or, in a noncombat

situation, at a tempo that allows the force to shape the situation or react to changes and accomplish its mission. Decision superiority does not automatically result from information superiority. Organizational and doctrinal adaptation, relevant training and experience, and the proper command and control mechanisms and tools are equally necessary.

The evolution of information technology will increasingly permit us to integrate the traditional forms of information operations with sophisticated all-source intelligence, surveillance, and reconnaissance in a fully synchronized information campaign. The development of a concept labeled

the global information grid will provide the network-centric environment required to achieve this goal. The grid will be the globally interconnected, end-to-end set of information capabilities, associated processes, and people to manage and provide information on demand to warfighters, policymakers, and support personnel. It will enhance combat power and contribute to the success of noncombat military operations as well. Realization of the full potential of these changes requires not only technological improvements,

but the continued evolution of organizations and doctrine and the development of relevant training to sustain a comparative advantage in the information environment.

We must also remember that information superiority neither equates to perfect information, nor does it mean the elimination of the fog of war. Information systems, processes, and operations add their own sources of friction and fog to the operational environment. Information superiority is fundamental to the transformation of the operational capabilities of the joint force. The joint force of 2020 will use superior information and knowledge to achieve decision superiority, to support advanced command and control capabilities, and to reach the full potential of dominant maneuver, precision engagement, full dimensional protection, and focused logistics. The breadth and pace of this evolution demands flexibility and a readiness to innovate.

Innovation

Joint Vision 2010 identified technological innovation as a vital component of the transformation of the joint force. Throughout the industrial age, the United States has relied upon its capacity for technological innovation to succeed in military operations, and the need to do so will continue. It is important, however, to broaden our focus beyond technology and capture the importance of organizational and conceptual innovation as well.

Innovation, in its simplest form, is the combination of new things with new ways to carry out tasks. In reality, it may result from fielding completely new things, or the imaginative recombination of old things in new ways, or something in between. The ideas in *Joint Vision 2010* as carried forward in *Joint Vision 2020* are indeed innovative and form a vision for integrating doctrine, tactics, training, supporting activities, and technology into new operational capabilities. The innovations that determine joint and service capabilities will result from a general understanding of what future conflict and military operations will be like, and a view of what the combatant commands and services must do in order to accomplish assigned missions.

An effective innovation process requires continuous learning—a means of interaction and exchange that evaluates goals, operational lessons, exercises, experiments, and simulations—and that must include feedback mechanisms. The combatant commands and services must allow our highly trained and skilled professionals the opportunity to create new concepts and ideas that may lead to future breakthroughs. We must foster the innovations necessary to create the joint force of the future—not only with decisions

Information superiority—the capability to collect, process, and disseminate an uninterrupted flow of information while exploiting or denying an adversary's ability to do the same (Joint Pub 1-02); achieved in a noncombat situation or one in which there are no clearly defined adversaries when friendly forces have the information necessary to achieve operational objectives.

Information environment—the aggregate of individuals, organizations, and systems that collect, process, or disseminate information, including the information itself (Joint Pub 1-02).



56th Signal Company (Milton H. Robinson)



1st Combat Camera Squadron (Jim Vanegey)

regarding future versus present force structure and budgets, but also with a reasonable tolerance for errors and failures in the experimentation process. We must be concerned with efficient use of time and resources and create a process that gives us confidence that our results will produce battlefield success. However, an experimentation process with a low tolerance for error makes it unlikely that the force will identify and nurture

the most relevant and productive aspects of new concepts, capabilities, and technology. All individuals and organizations charged with experimentation in support of the evolution of our combat forces must ensure that our natural concern for husbanding resources and ultimately delivering successful results does not prevent us from pursuing innovations with dramatic if uncertain potential.

There is, of course, a high degree of uncertainty inherent in the pursuit of innovation. The key to coping with that uncertainty is bold leadership supported by as much information as possible. Leaders must assess the efficacy of new ideas, the potential drawbacks to new concepts, the capabilities of potential adversaries, the costs versus benefits of new technologies, and the organizational implications of new capabilities. They must make these assessments in the context of an evolving analysis of the economic, political, and technological factors of the anticipated security environment. Each of these assessments will have uncertainty associated with them. But the best innovations have often come from people who made decisions and achieved success despite uncertainties and limited information.

By creating innovation, the combatant commands and services also create their best opportunities for coping with the increasing pace of change in the overall environment in which they function. Although changing technology is a primary driver of environmental change, it is not the only one. The search for innovation must encompass the entire context of joint operations—which means the Armed Forces must explore changes in doctrine, organization, training, matériel, leadership and education, personnel, and facilities as well as technology. Ultimately, the goal is to develop reasonable approaches with enough flexibility to recover from errors and unforeseen circumstances.

CONDUCT OF JOINT OPERATIONS

The complexities of the future security environment demand that the United States be prepared to face a wide range of threats of varying levels of intensity. Success in countering these threats will require the skillful integration of the core competencies of the services into a joint force tailored to the specific situation and objectives. Commanders must be afforded the opportunity to achieve the level of effectiveness and synergy necessary to conduct decisive operations across the entire range of military operations. When combat operations are required, they must have an overwhelming array of capabilities available to conduct offensive and defensive operations and against which an enemy must defend.



U.S. Navy (Chris Desmond)

Other complex contingencies such as humanitarian relief or peace operations will require a rapid, flexible response to achieve national objectives in the required timeframe. Some situations may require the capabilities of only one service, but in most cases, a joint force comprised of both active and Reserve components will be employed.

The complexity of future operations also requires that, in addition to operating jointly, our forces have the capability to participate effectively as one element of a unified national effort. This integrated approach brings to bear all the tools of statecraft to achieve our national objectives unilaterally when necessary, while making optimum use of the skills and resources provided by multinational military forces, regional and international organizations, nongovernmental organizations, and private voluntary organizations when possible. Participation by the joint force in operations supporting civil authorities will also likely increase in importance due to emerging threats to the U.S. homeland such as terrorism and weapons of mass destruction.

People

The core of the joint force of 2020 will continue to be an all volunteer force composed of individuals of exceptional dedication and ability. Their quality will matter as never before as our servicemembers confront a diversity of missions

and technological demands that call for adaptability, innovation, precise judgment, forward thinking, and multicultural understanding. The Nation will continue to depend on talented individuals of outstanding character, committed to an ethic of selfless service.

Our people will require a multitude of skills. The services will play a critical role in perfecting their individual specialties and the core competencies of each organization. In addition, every member of the total force must be prepared to apply that expertise to a wide range of missions as a member of the joint team. Our servicemembers must have the mental agility to transition from preparing for war to enforcing peace to actual combat, when necessary. The joint force commander is thereby provided a powerful, synergistic force capable of dominating across the entire range of operations.

The missions of 2020 will demand servicemembers who can create and then take advantage of intellectual and technological innovations. Individuals will be challenged by significant responsibilities at tactical levels in the organization and must be capable of making decisions with both operational and strategic implications. Our vision of full spectrum dominance and the transformation of operational capabilities has significant implications for the training and education of our



U.S. Navy (Leland B. Comer)

people. The tactics of information operations, the coordination of interagency and multinational operations, as well as the complexity of the modern tools of war all require people who are both talented and trained to exacting standards. Rapid and dispersed operations will require men and women who are part of a cohesive team, yet are capable of operating independently to meet the commander's intent. The evolution of new functional areas, such as space operations and information operations, will require development of appropriate career progression and leadership opportunities for specialists in those fields. The accumulation of training and experience will create a force ready to deploy rapidly to any point on the globe and operate effectively.

The joint force of 2020 will face a number of challenges in recruiting and retaining the outstanding people needed to meet these requirements. First, expanding civilian education and employment opportunities will reduce the number of candidates available for military service. We will continue to focus on our members' standard of living and a competitive compensation strategy to ensure we attract the quality individuals we need. Second, the increasing percentage of members with dependents will require a commitment to family-oriented community support programs and as much stability as possible, as well as close monitoring of the impact of the operations tempo. Finally, our increased dependence on the Reserve component will require us to address the concerns of our Reserve members and their employers regarding the impact on civilian careers. The Department of Defense must meet these challenges head-on.

Military operations will continue to demand extraordinary dedication and sacrifice under the most adverse conditions. Our total force, composed of professionals armed with courage, stamina, and intellect, will succeed despite the complexity and pace of future operations.

Interoperability

Interoperability is the foundation of effective joint, multinational, and interagency operations. The joint force has made significant progress toward achieving an optimum level of interoperability, but there must be a concerted effort toward continued improvement. Further improvements will include the refinement of joint doctrine as well as further development of common technologies and processes. Exercises, personnel exchanges, agreement on standardized operating procedures, individual training and education, and planning will further enhance and institutionalize these capabilities. Interoperability is a mandate for the joint force of 2020—especially in terms of communications, common logistics items, and information sharing. Information systems and equipment that enable a common relevant operational picture must work from shared networks that can be accessed by any appropriately cleared participant.

Interoperability—the ability of systems, units, or forces to provide services from other systems, units, or forces and to use the services so exchanged to enable them to operate effectively together (Joint Pub 1-02).

Although technical interoperability is essential, it is not sufficient to ensure effective operations. There must be a suitable focus on procedural and organizational elements, and decisionmakers at all levels must understand each other's capabilities and constraints. Training and education, experience and exercises, cooperative planning, and skilled liaison at all levels of the joint force will not only overcome the barriers of organizational culture and differing priorities, but will teach members of the joint team to appreciate the full range of service capabilities available to them.

The future joint force will have the embedded technologies and adaptive organizational structures that will allow trained and experienced people to develop compatible processes and procedures, engage in collaborative planning, and adapt as necessary to specific crisis situations. These features are not only vital to the joint force, but to multinational and interagency operations as well.



U.S. Navy (David Tucker)

Multinational Operations

Since our potential multinational partners will have varying levels of technology, a tailored approach to interoperability that accommodates a wide range of needs and capabilities is necessary. Our more technically advanced allies will have systems and equipment that are essentially compatible, enabling them to interface and share information in order to operate effectively with U.S. forces at all levels. However, we must also be capable of operating with allies and coalition partners who may be technologically incompatible—especially at the tactical level. Additionally, many

Multinational operations—a collective term used to describe military actions conducted by forces of two or more nations usually undertaken within the structure of a coalition or alliance (Joint Pub 1-02).

of our future partners will have significant specialized capabilities that may be integrated into a common operating scheme. At the same time, the existence of these relationships does not imply access to information without constraints. We and our multinational partners will continue to use suitable judgment regarding the protection of sensitive information and information sources.

In all cases, effective command and control is the primary means of successfully extending the joint vision to multinational operations. Technological developments that connect the information systems of partners will provide the links that lead to a common relevant operational picture and improve command and control. However, the sharing of information needed to maintain the tempo of integrated multinational operations also relies heavily on a shared understanding of operational procedures and compatible organizations. The commander must have the ability to evaluate

information in its multinational context. That context can only be appreciated if sufficient regional expertise and liaison capability are available on the commander's staff. A deep understanding of the cultural, political, military, and economic characteristics of a region must be established and maintained. Developing this understanding is dependent upon shared training and education, especially with key partners, and may require organizational change as well. The overall effectiveness of multinational operations is therefore dependent on interoperability between organizations, processes, and technologies.

Interagency Operations

The primary challenge of interagency operations is to achieve unity of effort despite the diverse cultures, competing interests, and differing priorities of the participating organizations, many of whom guard their relative independence, freedom of action, and impartiality. Additionally, these organizations may lack the structure and resources to support extensive liaison cells or integrative technology. In this environment and in the absence of formal command relationships, the future joint force must be proactive in improving communications, planning, interoperability, and liaison with potential interagency participants. These factors are important in all aspects of interagency operations, but particularly in the context of direct threats to citizens and facilities in the U.S. homeland. Cohesive interagency action is vital to deterring, defending against, and responding to such attacks. The joint force must be prepared to support civilian authorities in a fully integrated effort to meet the needs of U.S. citizens and accomplish the objectives specified by the National Command Authorities.

All organizations have unique information assets that can contribute to the common relevant operational picture and support unified action. They also have unique information requirements. Sharing information with appropriately cleared participants and integration of information from all sources are essential. Understanding each other's requirements and assets is also crucial. More importantly, through training with potential interagency partners, experienced liaisons must be

Interagency coordination—the coordination that occurs between elements of the Department of Defense and engaged U.S. Government agencies, nongovernmental organizations, private voluntary organizations, and regional and international organizations for the purpose of accomplishing an objective (Joint Pub 1-02).



1st Combat Camera Squadron (Jerry Morrison)

developed to support long-term relationships, collaborative planning in advance of crises, and compatible processes and procedures. As with our multinational partners, interoperability in all areas of interaction is essential to effective interagency operations.

Operational Concepts

The joint force capable of dominant maneuver will possess unmatched speed and agility in positioning and repositioning tailored forces from widely dispersed locations to achieve operational objectives quickly and decisively. The employment of dominant maneuver may lead to achieving objectives directly, but can also facilitate employment of the other operational concepts. For example, dominant maneuver may be employed to dislodge enemy forces so they can be destroyed through precision engagement. At times, achieving positional advantage will be a function of operational maneuver over strategic distances. Overseas or U.S.-based units will mass forces or effects directly to the operational theater. Information superiority will support the conduct of dominant maneuver by enabling adaptive and concurrent planning; coordination of widely dispersed units;

Dominant maneuver—the ability of joint forces to gain positional advantage with decisive speed and overwhelming operational tempo in the achievement of assigned military tasks. Widely dispersed joint land, sea, air, space, and special operations forces, capable of scaling and massing force or forces and the effects of fires as required for either combat or noncombat operations, will secure advantage across the range of military operations through the application of information, deception, engagement, mobility, and counter-mobility capabilities.

gathering of timely feedback on the status, location, and activities of subordinate units; and anticipation of the course of events leading to mission accomplishment. The joint force will also be capable of planning and conducting dominant maneuver in cooperation with interagency and multinational partners with varying levels of commitment and capability.

The capability to rapidly mass force or forces and the effects of dispersed forces allows the joint



U.S. Navy (Franklin P. Call)

force commander to establish control of the battlespace at the proper time and place. In a conflict, this ability to attain positional advantage allows the commander to employ decisive combat power that will compel an adversary to react from a position of disadvantage, or quit. In other situations, it allows the force to occupy key positions to shape the course of events and minimize hostilities or react decisively if hostilities erupt. And in peacetime, it constitutes a credible capability that influences potential adversaries while reassuring friends and allies.

Beyond the actual physical presence of the force, dominant maneuver creates an impact in the minds of opponents and others in the operational area. That impact is a tool available to the joint force commander across the full range of

military operations. In a conflict, for example, the presence or anticipated presence of a decisive force might well cause an enemy to surrender after minimal resistance. During a peacekeeping mission, it may provide motivation for good-faith negotiations or prevent the instigation of civil disturbances. In order to achieve such an impact, the commander will use information operations as a force multiplier by making the available combat power apparent without the need to physically move elements of the force. The joint force commander will be able to take advantage of the potential and actual effects of dominant maneuver to gain the greatest benefit.

Precision Engagement

Simply put, precision engagement is effects-based engagement that is relevant to all types of operations. Its success depends on in-depth analysis to identify and locate critical nodes and targets. The pivotal characteristic of precision engagement is the linking of sensors, delivery systems, and effects. In the joint force of the future, this linkage will take place across services and will incorporate the applicable capabilities of multinational and interagency partners when appropriate. The resulting system of systems will provide the commander the broadest possible range of capabilities in responding to any situation, including both kinetic and nonkinetic weapons capable of creating the desired lethal or nonlethal effects.

Precision engagement—the ability of joint forces to locate, surveil, discern, and track objectives or targets; select, organize, and use the correct systems; generate desired effects; assess results; and reengage with decisive speed and overwhelming operational tempo as required, throughout the full range of military operations.

The concept of precision engagement extends beyond precisely striking a target with explosive ordnance. Information superiority will enhance the capability of the joint force commander to understand the situation, determine the effects desired, select a course of action and the forces to execute it, accurately assess the effects of that action, and reengage as necessary while minimizing collateral damage. During conflict, the commander will use precision engagement to obtain lethal and nonlethal effects in support of the objectives of the campaign. This action could include destroying a target using



55th Signal Company (Clinton J. Evans)

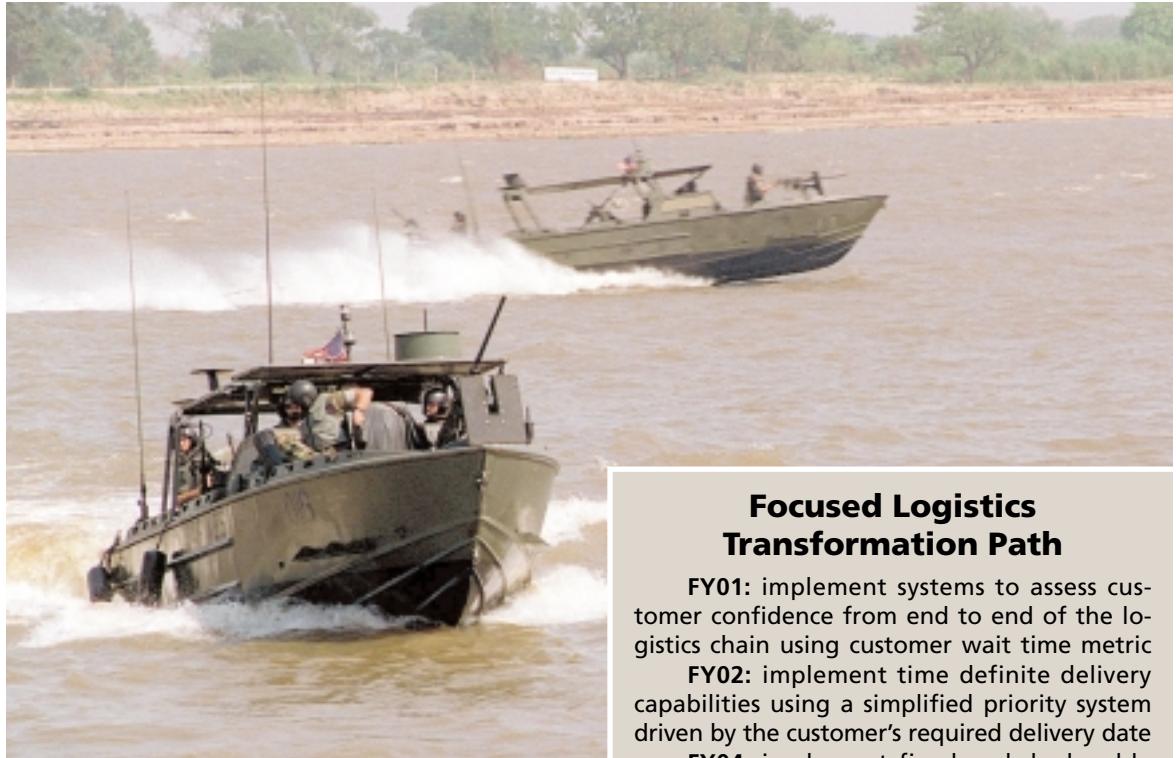
conventional forces, inserting a special operations team, or even the execution of a comprehensive psychological operations mission. In other cases, precision engagement may be used to facilitate dominant maneuver and decisive close combat. The commander may also employ nonkinetic weapons, particularly in the arena of information operations where the targets might be key enemy leaders or troop formations, or the opinion of an adversary population.

In noncombat situations, precision engagement activities will naturally focus on nonlethal actions. These actions will be capable of defusing volatile situations, overcoming misinformation campaigns, or directing a flow of refugees to relief stations, for example. Regardless of its application in combat or noncombat operations, the capability to engage precisely allows the commander to shape the situation or battlespace in order to achieve the desired effects while minimizing risk to friendly forces and contributing to the most effective use of resources.

Focused Logistics

Focused logistics will provide military capability by ensuring delivery of the right equipment, supplies, and personnel in the right quantities, to the right place, at the right time to support operational objectives. It will result from revolutionary improvements in information systems, innovation in organizational structures, reengineered processes, and advances in transportation technologies. This transformation has already begun with changes scheduled for the near term facilitating the ultimate realization of the full potential of focused logistics.

Focused logistics will effectively link all logistics functions and units through advanced information systems that integrate real-time total asset visibility with a common relevant operational picture. These systems will incorporate enhanced decision support tools that will improve analysis, planning, and anticipation of warfighter requirements. They will also provide a more seamless connection to the commercial sector to take advantage of applicable advanced business practices

2nd Marine Division (Tyler J. Melke)

and commercial economies. Combining these capabilities with innovative organizational structures and processes will result in dramatically improved end-to-end management of the entire logistics system and provide precise real-time control of the logistics pipeline to support the joint force commander's priorities. The increased speed, capacity, and efficiency of advanced transportation systems will further improve deployment, distribution, and sustainment. Mutual support relationships and collaborative planning will enable optimum cooperation with multinational and interagency partners.

The result for the joint force of the future will be an improved link between operations and logistics resulting in precise time-definite delivery of assets to the warfighter. This substantially improved operational effectiveness and efficiency, combined with increasing warfighter confidence in these new capabilities, will concurrently reduce sustainment requirements and the

Focused logistics—the ability to provide the joint force the right personnel, equipment, and supplies in the right place, at the right time, and in the right quantity, across the full range of military operations. This will be made possible through a real-time, web-based information system providing total asset visibility as part of a common relevant operational picture, effectively linking the operator and logistician across services and support agencies. Through transformational innovations to organizations and processes, focused logistics will provide the joint warfighter with support for all functions.

Focused Logistics Transformation Path

FY01: implement systems to assess customer confidence from end to end of the logistics chain using customer wait time metric

FY02: implement time definite delivery capabilities using a simplified priority system driven by the customer's required delivery date

FY04: implement fixed and deployable automated identification technologies and information systems that provide accurate, actionable total asset visibility

FY04: for early deploying forces and **FY06** for the remaining forces, implement a Web-based, shared data environment to ensure the joint warfighters' ability to make timely and confident logistics decisions.

vulnerability of logistics lines of communication, while appropriately sizing and potentially reducing the logistics footprint. The capability for focused logistics will effectively support the joint force in combat and provide the primary operational element in the delivery of humanitarian or disaster relief, or other activities across the range of military operations.

Full Dimensional Protection

Our military forces must be capable of conducting decisive operations despite our adversaries' use of a wide range of weapons (including weapons of mass destruction), the conduct of information operations or terrorist attacks, or the presence of asymmetric threats during any phase of these operations. Our people and the other



military and nonmilitary assets needed for the successful conduct of operations must be protected wherever they are located—from deployment, to theater combat, to redeployment. Full dimensional protection exists when the joint force can decisively achieve its mission with an acceptable degree of risk in both the physical and information domains.

Full dimensional protection—the ability of the joint force to protect its personnel and other assets required to decisively execute assigned tasks. Full dimensional protection is achieved through the tailored selection and application of multilayered active and passive measures within the domains of land, sea, air, space, and information across the range of military operations with an acceptable level of risk.

The capability for full dimensional protection incorporates a complete array of both combat and non-combat actions in offensive and defensive operations, enabled by information superiority. It will be based upon active and passive defensive measures, including theater missile defenses and possibly limited missile defense of the

United States, offensive countermeasures, security procedures, antiterrorism measures, enhanced intelligence collection and assessments, emergency preparedness, heightened security awareness, and proactive engagement strategies. Additionally, it will extend beyond the immediate theater of operations to protect our reach-back, logistics, and key

capabilities in other locations. There is a critical need for protection of the information content and systems vital for operational success, including increased vigilance in counterintelligence and information security. The joint force of 2020 will integrate protective capabilities from multinational and interagency partners when available and will respond to their requirements when possible. Commanders will thoroughly assess and manage risk as they apply protective measures to specific operations, ensuring that an appropriate level of safety, compatible with other mission objectives, is provided for all assets.

The joint force commander will thereby be provided an integrated architecture for protection, which will effectively manage risk to the joint force and other assets, and leverage the contributions of all echelons of our forces and those of our multinational and interagency partners. The result will be improved freedom of action for friendly forces and better protection at all echelons.

Information Operations

Information operations are essential to achieving full spectrum dominance. The joint force must be capable of conducting information operations, the purpose of which is to facilitate



and protect U.S. decisionmaking processes and, in a conflict, degrade those of an adversary. While activities and capabilities employed to conduct information operations are traditional functions of military forces, the pace of change in the information environment dictates that we expand this view and explore broader information operations, strategies, and concepts. We must recognize that nontraditional adversaries who engage in nontraditional conflict are of particular importance in the information domain. The United States itself and U.S. forces around the world are subject to information attacks on a continuous basis regardless of the level and degree of engagement in other domains of operation.

Information operations—those actions taken to affect an adversary's information systems while defending one's own information systems (Joint Pub 1-02). Information operations also include actions taken in a noncombat or ambiguous situation to protect one's own information and information systems as well as those taken to influence target information and information systems.

The perpetrators of such attacks are not limited to the traditional concept of a uniformed military adversary. Additionally, the actions associated with information operations are wide-ranging—from physical destruction to psychological operations to computer network defense. The task of integrating information operations with other joint force operations is complicated by the need to understand the many variables involved (summarized in box).

Our understanding of the interrelationships of these variables and their impact on military operations will determine the nature of information operations in 2020. The joint force commander will conduct information operations whether facing an adversary during a conflict or

engaged in humanitarian relief operations. Such operations will be synchronized with those of multinational and interagency partners as the situation dictates. New offensive capabilities such as computer network attack techniques are evolving. Activities such as information assurance, computer network defense, and counterdeception will defend decisionmaking processes by neutralizing an adversary's perception management and intelligence collection efforts, as well as direct attacks on our information systems. Because the ultimate target of information operations is the human decisionmaker, the joint force commander will have difficulty accurately assessing the effects of those operations. This problem of battle damage assessment for information operations is difficult and must be explored through exercises and rigorous experimentation.

The continuing evolution of information operations and the global information environment holds two significant implications. First, operations within the information domain will become as important as those conducted in the domains of land, sea, air, and space. Such operations will be inextricably linked to focused logistics, full dimensional protection, precision engagement, and dominant maneuver, as well as joint command and control. At the same time, information operations may evolve into a separate mission area requiring the services to maintain appropriately designed organizations and trained specialists. Improvements in doctrine, organization, and technology may lead to decisive outcomes resulting primarily from information operations. As information operations continue to evolve, they, like other military operations, will be conducted consistent with the norms of our society, our alliances with other democratic states, and full respect for the laws of armed conflict. Second, there

The Variables of Information Operations

- multidimensional definition and meaning of *information*—target, weapon, resource, or domain of operations
- level of action and desired effect—tactical, operational, strategic, or combination
- objective of operations—providing information, perception management, battlefield dominance, command and control warfare, systemic disruption, or systemic destruction
- nature of situation—peace, crisis, or conflict.



U.S. Navy (T. Van Nequin)

is significant potential for asymmetric engagements in the information domain. The United States has enjoyed a distinct technological advantage in the information environment and will likely continue to do so. However, as potential adversaries reap the benefits of the information revolution, the comparative advantage for the United States and its partners will become more difficult to maintain. Additionally, our ever-increasing dependence on information processes, systems, and technologies adds potential vulnerabilities that must be defended.

Command and Control

Command and control is the exercise of authority and direction over the joint force. It is necessary for the integration of service core competencies into effective joint operations. The increasing importance of multinational and interagency aspects of the operations adds complexity and heightens the challenge of doing so. Command and control includes planning, directing, coordinating, and controlling forces and operations and is focused on the effective execution of the operational plan; but the central function is decisionmaking.

Command and control is most effective when decision superiority exists. Decision superiority results from superior information filtered through the commander's experience, knowledge, training, and judgment; the expertise of supporting staffs and other organizations; and the efficiency of associated processes. While changes in the information environment have led some to focus solely on the contribution of information superiority to command and control, it is equally necessary to understand the complete realm of command and control decisionmaking, the nature of organizational collaboration, and especially the human in the loop.

In the joint force of the future, command and control will remain the primary integrating and coordinating function for operational capabilities and service components. As the nature of military operations evolves, there is a continual need to evaluate the nature of command and control organizations, mechanisms, systems, and tools. There are two major issues to address in this evaluation—command structures and processes, and the information systems and technologies that are best suited to support them. Encompassed within these two issues, examination of the following related ideas and desired capabilities will



U.S. Navy (Shane McCoy)

serve as a catalyst for changes in doctrine, organization, and training.

- Commanders will need a broad understanding of new operational capabilities and new (often highly automated) supporting tools in order to be capable of flexible, adaptive coordination and direction of both forces and sensors.
- The staffs that support commanders must be organized and trained to take advantage of new capabilities. Commanders and staffs must also be capable of command and control in the face of technology failure.
- Commanders will be able to formulate and disseminate intent based upon up-to-date knowledge of the situation existing in the battlespace.
- Joint force headquarters will be dispersed and survivable and capable of coordinating dispersed units and operations. Subordinate headquarters will be small, agile, mobile, dispersed, and networked.
- Faster operations tempos, increased choices among weapons and effects, and greater weapons ranges will require continuous, simultaneous planning and execution at all levels.
- Expanding roles for multinational and interagency partners will require collaborative planning capabilities, technological compatibility/interoperability, and mechanisms for efficient information sharing.

Finally, as these and other changes take place over time, we must carefully examine three aspects of the human element of command and

control. First, leaders of the joint force must analyze and understand the meaning of unit cohesion in the context of the small, widely dispersed units that are now envisioned. Second, decision-makers at all levels must understand the implications of new technologies that operate continuously in all conditions when human beings are incapable of the same endurance. Third, as new information technologies, systems, and procedures make the same detailed information available at all levels of the chain of command, leaders must understand the implications for decision-making processes, the training of decisionmakers at all levels, and organizational patterns and procedures. The potential for overcentralization of

Command and control—the exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. Command and control functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of the mission (Joint Pub 1-01).

control and the capacity for relatively junior leaders to make decisions with strategic impact are of particular importance.

It has often been said that command is an art and control is a science—a basic truth that will remain. Our thinking about command and control must be conceptually based rather than focused on technology or matériel. Joint command and control is a nexus—a point of connection. It serves as a focal point for humans and technology, our evolving operational capabilities, and the capabilities of the services. The development of effective joint command and control for the future requires rigorous and wide-ranging experimentation, focused especially on organizational innovation and doctrinal change.

IMPLEMENTATION

Joint Vision 2010 has had a profound impact on the development of U.S. military capabilities. By describing those capabilities necessary to achieve success in 2010, we set in motion three important efforts. First, *Joint Vision 2010* established a common framework and language for the services to develop and explain their unique contributions to the joint force. Second, we created a process for the conduct of joint experimentation and training to test ideas against practice. Finally, we began a process to manage the transformation of doctrine, organization, training, matériel, leadership and education, personnel, and facilities necessary to make the vision a reality. *Joint Vision*

From Vision to Experimentation

- *Joint Vision 2010* (1996)
- Concept for Future Joint Operations (1997)
- 21st Century Challenges and Desired Operational Capabilities (1997)
- Joint Warfighting Experimentation Program established, ACOM (JFCOM) as executive agent (1998)
- Joint Vision Implementation Master Plan (1998)
- CJCS Instruction 3170, Requirements Generation System (1999)
- JFCOM Joint Experimentation Campaign Plans (1999 and 2000).

2020 builds on this foundation of success and will sustain the momentum of these processes.

The foundation of jointness is the strength of individual service competencies pulled together. Our objective in implementing the joint vision is the optimal integration of all joint forces and effects. To achieve that goal, the interdependence of the services requires mutual trust and reliance among all warfighters and a significantly improved level of interoperability—especially in the areas of command and control and sustainment. This interdependence will ultimately result in a whole greater than the sum of its parts and will contribute to achieving full spectrum dominance through all forces acting in concert. The synergy gained through the interdependence of the services makes clear that jointness is more than interoperability. The joint force requires capabilities that are beyond the simple combination of service capabilities, and joint experimentation is the process by which those capabilities will be achieved.

To ensure unity of effort and continuity for joint concept development and experimentation, the Secretary of Defense designated the commander in chief, Joint Forces Command as the executive agent for experimentation design, preparation, execution, and assessment. Annual campaign plans provide focus to this effort and continuity in experimentation. The results of this iterative experimentation cycle are forwarded as comprehensive recommendations for changes in doctrine, organization, training, matériel, leadership and education, personnel, and facilities and lead to the co-evolution of all those elements. The experimentation and implementation

Figure 3. From Concepts to Capabilities





joint team capable of success across the full range of military operations.

This vision is firmly grounded in the view that the U.S. military must be a joint force capable of full spectrum dominance. Its basis is four-fold: the global interests of the United States and the continuing existence of a wide range of potential threats to those interests; the centrality of information technology to the evolution of not only our own military, but also the capabilities of other actors around the globe; the premium a continuing broad range of military operations will place on the successful integration of multi-national and interagency partners and the interoperability of processes, organizations, and systems; and our reliance on the joint force as the foundation of future U.S. military operations.

Joint Vision 2020 builds on the foundation and maintains the momentum established with *Joint Vision 2010*. It confirms the direction of the ongoing transformation of operational capabilities, and emphasizes the importance of further experimentation, exercises, analysis, and conceptual thought, especially in the arenas of information operations, joint command and control, and multinational and interagency operations.

This vision recognizes the importance of technology and technical innovation to the U.S. military and its operations. At the same time, it emphasizes that technological innovation must be accompanied by intellectual innovation leading to changes in organization and doctrine. Only then can we reach the full potential of the joint force—decisive capabilities across the full range of military operations. Such a vision depends upon the skill, experience, and training of the people comprising the total force and their leaders. The major innovations necessary to operate in the environment depicted herein can only be achieved through the recruitment, development, and retention of men and women with the courage, determination, and strength to ensure we are persuasive in peace, decisive in war, and preeminent in any form of conflict.

JFQ

process supporting the transformation of the joint force is also dependent upon combatant command and service exercises and experimentation activities. The combatant command and service visions support the joint vision by providing guidance for these individual efforts that are congruent with the Chairman's vision. Thus, in their own experimentation venues, the services may develop recommendations with joint implications and will forward them to the appropriate joint experimentation activity.

To effect transforming and enduring changes to our joint military capabilities, the experimentation and implementation process must include construction of a wide range of scenarios and imaginative conflict simulations to explore the shape of future operations. Such intensive exploration of alternative concepts of operations can help the U.S. military choose innovations that take the greatest advantage of combinations of new ideas and new technologies. The rapid pace of such changes will then drive further development of the experimentation and implementation process to field improved capabilities for the joint force.

The linchpin of progress from vision to experimentation to reality is joint training and education—because they are the keys to intellectual change. Without intellectual change, there is no real change in doctrine, organizations, or leaders. Thus, the implementation process is dependent upon incorporating concepts validated by experimentation into joint professional military education programs and joint exercises. In this way, individual servicemembers and units become a

Joint Vision 2020: America's Military—Preparing for Tomorrow was published by the U.S. Government Printing Office in June 2000. (Approval authority: Chairman of the Joint Chiefs of Staff; office of primary responsibility: Strategy Division, Directorate for Strategic Plans and Policy (J-5), Joint Staff).



Progress Report

on Joint Experimentation

By HAROLD W. GEHMAN, JR.

Each service has an experimentation program, but who does the joint part? In 1998 U.S. Atlantic Command (ACOM), the predecessor to U.S. Joint Forces Command (JFCOM), was designated as the executive agent for joint experimentation. The action was taken in concert with Congress, which was concerned over preparing for security challenges in an evolutionary fashion, without sufficient attention to the future. With its marching orders in

hand, JFCOM is forging a program that satisfies those concerns in the near and far terms.

Laying the Foundations

The goal of JFCOM is a broad and unconstrained exploration of concepts and technologies that will add value and provide empirical data to support decisions. The effort has two purposes: to sustain and widen the qualitative superiority of joint forces over potential enemies and to prevent surprise attacks utilizing new concepts and weapons. JFCOM will conduct evaluations not only to find new technologies but also to learn the best tactics, techniques, and procedures for employing a joint force. Moreover, it is looking at

Admiral Harold W. Gehman, Jr., USN (Ret.), served as Commander in Chief, Joint Forces Command, and Supreme Allied Commander, Atlantic, and earlier as Vice Chief of Naval Operations.

ways to expand interagency and allied involvement. A key point in structuring a program is to meet current and future requirements. True experimentation is an iterative process intended to gain knowledge before making expensive decisions on future forces.

ACOM produced an implementation plan to provide the intellectual and organizational basis for this mission. When the Joint Experimentation Directorate (J-9) was activated in October 1998, the foundations had been laid for working with the services, unified commands, defense agencies, industry, and academe on exploring new concepts. Consideration had been given to the scope and intent of the program, especially in relation to existing service experimentation.

Initial Accomplishments

The pace of establishing the program has been fast and furious, with implementation in less than a year. Much work went into gathering warfighting concepts with transformational promise, winnowing them down, and identifying high payoff ideas for experimentation. The selected joint concepts, experiments, and related activities are collected in an annual campaign plan, which serves to focus on the most compelling challenges facing commanders as well as informing the services.

Joint experimentation is a balanced program that moves along three axes. The first looks at how off-the-shelf technologies can enhance concepts, including interoperability problems involving current systems. This near-term axis helps

maintain an edge over extant threats and capitalizes on JFCOM assets. One aspect is the sponsorship of advanced concept technology demonstrations that can be quick on-ramps for promising solutions to existing problems.

The second (mid-term) axis focuses on *Joint Vision 2020* and how concepts, technologies, and advanced information systems can support the evolution of a joint force. Using platforms or their derivatives, this axis consists of activities which seek to enhance synergy and effectiveness, enabling full spectrum dominance over emerging threats facing the Armed Forces.

The third investigates revolutionary concepts and technologies to transform the joint force, facilitating continued success against challenges in the revolution in military affairs. This far-term axis seeks breakthrough discoveries in technology, policy, and man-machine interface.

JFCOM updates every component of the campaign plan annually to ensure staying on the cutting edge. Demonstrating the dynamic nature of the process, some of the concepts in Campaign Plan '99 were removed or modified for the following year. Nine concepts made the cut.

Rapid decisive operations serves as an overarching integrating concept for the other joint initiatives. Its characteristics are immediate, high-tempo, continuous overwhelming operations, and the ability to shape and control the battlespace, integrate application of precision effects and dominant maneuver, and minimize the need for protracted campaigns.

Evolution of a Command

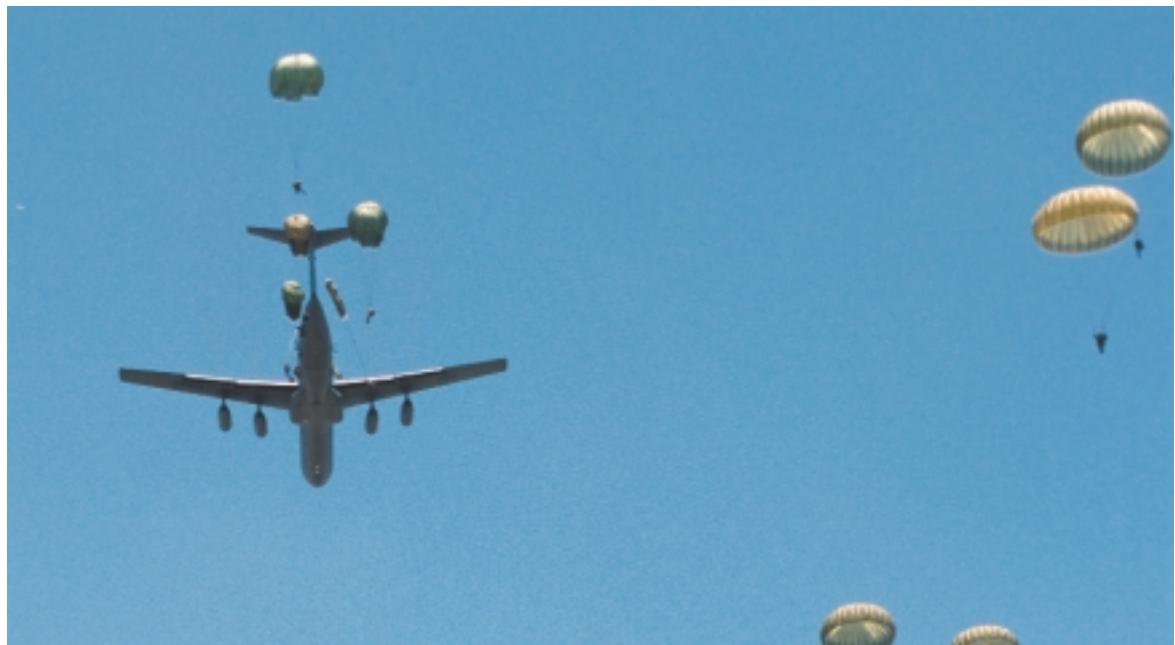
U.S. Joint Forces Command (JFCOM) was established on October 7, 1999, with responsibility for joint force integration, training, experimentation, doctrine development, and testing as well as its role as a combatant command.

When its earliest predecessor, U.S. Atlantic Command (LANTCOM), was established in 1947, it was one of the original unified commands. At that time it was primarily a maritime command with responsibility for the Atlantic Ocean, especially sealanes between the United States and Europe. From the outset, LANTCOM devoted most of its assets to protecting the north Atlantic against Soviet submarines. NATO created the Allied Command Atlantic in 1952 with headquarters adjacent to LANTCOM in Norfolk and designated the Commander in Chief, Atlantic Command, as Supreme Allied Commander, Atlantic.

LANTCOM received responsibility for the Caribbean in 1956 and events in Cuba in 1959 transformed this area into a turbulent region. Other operations in the area included the Dominican Republic (1965) and Grenada (1983). Changes in the Unified Command Plan in 1997 transferred oversight of the Caribbean to U.S. Southern Command.

Increased emphasis on jointness led to significant changes in the LANTCOM mission and its redesignation as U.S. Atlantic Command (ACOM) in 1993. With calls for improved interoperability among the services, the Joint Chiefs recommended that ACOM be assigned responsibility for joint training and integration. Changes in the Unified Command Plan also directed that ACOM assume peacetime control over U.S. Army Forces Command and Air Combat Command. Today, JFCOM is the provider, trainer, and integrator of joint forces.

82d Airborne jumping at McGuire Air Force Base.



Marines at Twentynine Palms.

2d Marine Division Combat Camera (Donald R. Storms, Jr.)



305th Communications Squadron (Scott H. Spitzer)

Attack operations against critical mobile targets is aimed at improving detection, decision, and engagement of a maneuvering enemy. It addresses threats to warfighting capabilities posed by mobile systems, including theater ballistic missiles and integrated air defense systems.

Adaptive joint command and control investigates alternatives to joint force headquarters and components to leverage advances in information technology.

Improving synchronization of joint operations, an adaptive joint force structure, and reducing the footprint of joint headquarters are the primary objectives.

Joint interactive planning seeks new planning and decision support tools to enable faster interactive, simultaneous, and parallel planning. Dynamic tasking and retasking of forces, quicker decisions, and control over the operational tempo are key elements.

Common relevant operational picture provides commanders and subordinates on all levels with timely, fused, accurate, assured, relevant information. Building a single integrated air picture is an important subset of this concept.

Focused logistics enabling early decisive operations is focused on providing commanders with improved joint and service support through fused, tailored, time-definite logistics. It includes

less dependence on fixed port facilities and improved business practices and information fusion.

Information operations recognizes the need to protect and assure friendly information while permitting commanders to disrupt, deny, exploit, or destroy enemy capabilities. It is a key element of information superiority.

Forcible entry operations focuses on rapid deployment and employment of joint forces to penetrate and conduct decisive operations in hostile territory. It considers alternatives to overcome denial of access to strategic areas and facilitates follow-on sustained combat operations.

Strategic deployment seeks an optimum mix of in-theater forces, deployment assets, pre-positioned matériel, and near-theater staging alternatives to enable rapid decisive operations. Key goals are faster joint force projection, quick transition to combat, and support to rapid intra-theater maneuver.



5th Communications Squadron (Anna M. Hayman)

B-2 at Minot Air Force Base.

To provide a starting point and minimize redundancy, ACOM developed a baseline from all sources of past concept development and experimentation efforts and ongoing or planned activities which might be used to explore a selected concept. So far the command has completed baselines for six of the nine experimentation concepts.

Baselining has jumpstarted experimentation and made it more efficient. For example, in August 1999, some 46 defense agencies met for the first time to pool their experience in attack operations. These agencies continue to interact through bilateral discussions and as part of the investigation of the attack operations against critical mobile targets concept. In conjunction, the first joint experiment explored the dynamics of attacking mobile target sets such as mobile theater ballistic missiles, air defenses, and command and control systems. This offered insights into coping with time-sensitive targeting and asymmetrical tactics, techniques, and procedures used by agile, innovative enemies.

The results of this experiment influenced the development of technology, doctrine, tactics, techniques, and procedures. They suggest that technology development to improve attack operations is on track and that real-time sensor management and having a man-in-the-loop are essential. They also imply that methods other than direct attack may be equally effective at neutralizing theater ballistic missiles. Analysis and follow-on experiments are continuing.

Another critical element of the program is developing strong partnerships with a wide range of organizations. Advanced technology workshops have gathered experts from the Armed Forces, governmental agencies, industry, and academe to shape the joint force after next. Together with service battle lab representatives, the command has formed the Alliance of All Service Battlelabs to foster debate and identify opportunities for experiment teaming. This group complements the work of the JFCOM Joint Battle Center.

In addition, international experimentation has been addressed. Future military operations will involve coalition partners, which is reflected in a dialogue on experimentation with allies. The first step was supporting NATO in its new concept development and experimentation program by sharing what ACOM learned in its first year of joint experimentation.

What the Future Holds

Finite amounts of time, people, and money, and the staggering catalog of ideas on which to experiment, call for discrimination. Concepts chosen for FY00, and those selected for subsequent campaign plans, must demonstrate certain qualifications to make the cut.

Experiments on attack operations against critical mobile targets exemplify the iterative and refining nature of the program. Building on past events, the current iteration integrated lessons of the Kosovo campaign. The requirements for locating, tracking, and eliminating mobile air defense systems in that campaign were virtually identical to those addressed in the attack operations against mobile theater missiles. Mobile air defense systems were added as targets in experiments during the year. There are plans to expand this investigation, then evaluate findings from experiments in 1999 against this broader operational environment.

Another area in which dynamic change is expected involves rapid decisive operations. A recent analytical wargame explored three candidate concepts for conducting such operations within a



2d Marine Division Combat Camera (Donald R. Stevens, Jr.)

Combined arms exercise, Twentynine Palms.

common scenario. The game engaged senior decisionmakers in a seminar environment with a rigorous, constructive, nonattrition-based simulation. One element was understanding how precision allows maneuver to shape the battlespace and create opportunities for precision engagement.

The FY00 program culminates in the first of a series of exercises designed to synchronize then integrate major service field experiments. Called Millennium Challenge '00, it is being conducted in September 2000 as simultaneous and near-simulta-

neous experimentation events in partnership with the services and unified commands. It offers a joint context for the Air Force Joint Expeditionary Force Experiment, the Army Ad-

vanced Warfighting Experiment, the Navy Fleet Battle Experiment-Hotel, and the Marine Corps Millennium Dragon.

This exercise is focused on rapid decisive operations and examines means to enhance the joint deployment process; develop tactics, techniques, and procedures for joint collaborative planning tools; and identify essential elements of the common operational picture and served as a prototype of future experiments. It is synchronized with the annual Ulchi Focus Lens exercise to develop and validate the JFCOM precision engagement concept of operations.

In addition to offering a joint scenario, tools, and context for service experimentation, the series acts as a venue for exploring the operational aspects of rapid decisive operations, which will culminate in a major integrating event in FY04.

To accelerate the benefits of the program, a Millennium Challenge '02 event may be added if service agreements, manpower issues, and funding are resolved. Though collaboration with the services was rapid for Millennium Challenge '00, it was only an initial step in a program of some complexity. Based on many issues involved, the command is looking at what would be needed to execute an intermediate step in FY02, using initial service elements of their transformed forces in a consolidated, integrated experiment.

JFCOM is also increasingly involved in international concept development and experimentation programs. The purpose is to ensure that the future joint force can rapidly form coalitions of willing international partners and prosecute operations as a combined force. This is essential to the desired endstate in each concept. The first allied liaison officer is serving with the joint experimentation team, and additional nations are preparing to commit personnel. International work is greatly enhanced by the fact that the Commander in Chief, Joint Forces Command, also serves as NATO Supreme Allied Commander Atlantic, and by the benefits of work being done under NATO in the same area.

Finally, looking beyond *Joint Vision 2020*, a matter of growing interest is innovation and transformation, focused on technological, organizational, and doctrinal concepts that will shape the joint force after next. Seminars, workshops, and games are pulling together the sharpest minds to identify concepts and technologies that may revolutionize military capabilities. While these notions address the future, they are part of an adaptive exploration. Many ideas and technologies may be achievable sooner than originally thought, with a much earlier operational impact.

Joint Requirements

The revisions in the Unified Command Plan in 1999 also provided JFCOM with a mandate to promote jointness. Vital to this responsibility is involvement in the joint requirements process, particularly in the development of capstone documentation. Accordingly, the command has begun to advocate jointness and interoperability in generating requirements. An initial analysis identified several areas calling for an aggressive joint advocate, so JFCOM took the lead in the following:

- combat identification
- theater air and missile defense
- global information grid
- information dissemination management.

The command is moving pragmatically by choosing areas with a high payoff. Doing a few things right is better than doing many poorly. Through

many ideas and technologies may be achievable sooner than originally thought, with a much earlier operational impact

a deliberative process, nine joint warfighting areas that will have the greatest immediate impact on joint warfighting have been selected:

- theater air and missile defense
- command and control
- combat identification
- intelligence, surveillance, and reconnaissance
- attack operations against critical mobile targets
- joint deployment process
- joint simulation system
- battlefield awareness
- deep strike and battlefield interdiction.

At the same time JFCOM has many opportunities to influence the development and approval of all mission needs statements regardless of acquisition category or origination source. Each is affected by the Joint Requirements Oversight Council (JROC) or the Joint Staff interoperability certification process, ensuring that mission need statements are reviewed for interoperability compliance.

JFCOM also influences the staffing of service-generated operational requirements. This is critical because these documents define program performance parameters for improving interoperability. These parameters describe the particulars of capabilities within a larger operational architecture and include the definition of the joint information exchange requirements for measuring program success. By reviewing service mission need statements JFCOM can help integrate capabilities across functional components.

in JROC and the Defense Acquisition Board. The command selectively engages in those issues that fall within its focus and offer the greatest opportunity to advance joint equities. This approach has developed a healthy partnership between JFCOM and the services.

Many incorrectly presume that joint requirements address only matériel. In fact the JFCOM mandate includes all doctrinal, organizational, training and education, leader development, and personnel areas as well. For example, the recommendation arising from initial experimentation into attack operations against critical mobile targets is an organizational and doctrinal proposal for a critical mobile target attack cell within joint task forces.

Additional legislative initiatives have enhanced the ability of JFCOM to furnish input on the full range of requirements. The Defense Authorization Act for FY00 amended Title 10 to strengthen the voice of unified commanders in the resourcing process and requires the Chairman to submit an annual report to Congress on requirements by August 15 of each year. The report consolidates the integrated priority lists of requirements of combatant commands and CJCS views on these lists. JFCOM regards this development as a means of strengthening the role of the joint warfighter in the process. While CINC integrated priority lists will continue to go directly to the Secretary of Defense for action, the Chairman will submit a consolidated integrated priority list to Congress highlighting critical CINC warfighting deficiencies to be resourced.

The JFCOM joint experimentation program has completed the first steps toward becoming a major influence in transforming the joint force. The accomplishments of FY99 set the conditions for continuing, accelerating, and expanding the work. The impact of the first year of the program is seen in greater cooperation among service experimentation programs, valuable lessons learned from initial experimentation, greater synergy of effort, and more precise focus on emerging needs of the warfighting CINCs. Campaign Plan '00 provides an effective construct for building on the accomplishments of this increasingly successful effort for the Armed Forces.

JFQ



1st Combat Camera Squadron (Jim Varnegy)

**Intelligence analysts,
Roving Sands 2000.**

Once JROC or service acquisition executives approve a requirements document, it migrates from requirements generation into system acquisition. JFCOM has the opportunity to participate on every level of decisionmaking from the integration process team level to CINC involvement



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Comparative Approaches to Interwar Innovation

By WILLIAMSON MURRAY

Military organizations encounter conceptual problems during periods of innovation. First, since the future is rarely obvious, the process is dominated by ambiguity and uncertainty. Second, the conditions of war can seldom be replicated in peacetime. Experimentation in peacetime, along with coherent analyses of recent combat experience, drives innovation or retards

it and is crucial in testing concepts and technology, although what Clausewitz refers to as the difference between "war on paper and real war" often obscures their lessons.

Experiments do not occur in a vacuum. They are related to concepts about the nature of war. Moreover, they are vital in transmitting doctrine to combat forces and providing a framework around which training and preparations for war occur. To an extent they can furnish a test—albeit not entirely realistic—of how concepts work in practice. Finally, experiments occur in human organizations. Consequently, political and organi-

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Field radio, German
2^d Command Group.

Some historians hold that armies focus on the last war, which explains why they do badly in the next. That claim is generally misleading since military organizations rarely study what actually happened, but rather what they believe happened. They thus do not address discomforting issues, which is the only way to learn from the past. In the case of Germany, however, Seeckt established no fewer than 57 committees on World War I. He remarked that "it is absolutely necessary to put the experience of the war in a broad light and collect this experience while the impressions won on the battlefield are still fresh and a major proportion of the experienced officers are still in leading positions."¹

The lessons learned were combined in two doctrinal studies in 1923 and 1924 that provided Germany with the most reliable tactical doctrine available in Europe. In 1932 three senior generals, including the future commander in chief of the army, Werner von Fritsch, and future chief of staff, Ludwig Beck, rewrote the 1923 and 1924 studies. Publication of *Die Truppenfuhrung* formed the framework for the preparation and conduct of ground operations during World War II.

This doctrine did not use a top down approach, but rather stressed friction, uncertainty, and the requirement for junior officers to assume responsibility and exercise judgment. What is more, substantial parts of *Die Truppenfuhrung* dealt with the greater use of tanks at a time when the army did not have a single armored fighting vehicle. In fact, it even suggested that "when closely tied to the infantry, the tanks are deprived of their inherent speed." This is critical because it meant that by the early 1920s Germany had a coherent combined arms doctrine that emphasized decentralized command and control (mission type orders), speed, surprise, and aggressive exploitation of any weaknesses in enemy defensive systems.

Development of *Wehrmacht* panzer forces took place during the 1930s within the context of combined arms doctrine. Tank pioneers emphasized that panzer units must include integral forces such as motorized infantry, artillery, engineers, and signal troops. Doctrine stressed the ruthless, mobile, and rapid exploitation of breakthroughs by panzer units. Yet such thinking was inherent in the doctrine of other combat branches at the time. Thus new panzer divisions simply extended the principles on which German doctrine rested, which explains why infantrymen like Erwin Rommel and artillerymen like Eric von Manstein found it relatively easy to command armored formations.

zational agendas of institutions affect the realism of experimentation—and what is learned.

The role of experiments in the innovation process during the interwar period suggests much about the attributes that enhanced change or detracted from it. This analysis traces experimentation in German, French, and British militaries and concludes with observations about experimentation and innovation during a sustained period of peace. The purpose is not to imply parallels with the past, but rather to determine the limits within which experiments might further innovation in an uncertain future.

Lessons Learned

During the interwar years military culture in Germany was very receptive to innovation for a number of reasons. Nevertheless, it did not set out to create what pundits early in World War II called *Blitzkrieg* warfare. Instead it aimed to evolve capabilities that addressed current as well as long-range operational and tactical problems.

The crucial point in developing armored mechanized warfare came in the early 1920s, when General Hans von Seeckt assumed command of the army. Responding to the demand under the Treaty of Versailles for massive downsizing, which reduced the officer corps by 80 percent, Seeckt placed the general staff in firm control of the army. Putting the educated elite in charge led to a thorough and realistic assessment of World War I.

the lessons learned provided Germany with the most reliable tactical doctrine available in Europe

Hindenburg during
maneuvers, 1931.



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Testing for Effect

The German army conducted experiments within an existing framework. The object was to test doctrine and concepts, not to prove them. Consequently there were few scripted drills, and the goal was to push units to the breaking point—to discover how things went wrong and why. There was little room for events in which all the objectives were met. Although the Germans were still involved in lessons learned processes focused on World War I, Seeckt was already urging officers in new directions. In 1922, with limited resources, the army conducted a major experiment in the Harz Mountains with motorized troops. Seeckt's observations on that event reveal why Germany was successful in mechanized warfare innovation. In circulating the after action report he made the following observation:

I fully approve of the Harz exercise's conception and leadership, but there is still much that is not clear about the specific tactical use of motor vehicles. I therefore order that the following report be made available by all staffs and independent commands as a topic for lectures and study. Troop commanders must see to it that experience in this area is widened by practical exercises.

Seeckt sought to engross the whole force in an intellectual transformation.

Although they possessed no tanks, the Germans learned much from the British experiments with mechanized forces between 1926 and 1934.

A report in 1926 on the experimental armored force maneuver stated that tanks could substantially increase the exploitation of breakthroughs in enemy front lines. It also suggested that the *Reichswehr* undertake serious experiments in how to defend against tanks breaking into rear areas—in other words, execute a mobile defense in depth. Almost immediately after British maneuvers in 1934, the chief of the general staff circulated an extensive report on what occurred on the Salisbury Plain and what it meant for the rapidly rearming army, which had yet to establish its first panzer division.

The appointment of Adolph Hitler as Chancellor in January 1933 changed the situation of the *Reichswehr*. At his first meeting with senior officers he authorized a massive buildup and told them to disregard the prohibitions imposed at Versailles. In 1935 an experimental, battalion-level force of tanks impressed Fritsch and Beck enough that they approved the formation of three panzer divisions.² Again, the German army did not leap into the future; it organized tank brigades to work with infantry as well as motorized infantry divisions and set about learning how mechanized units could extend the capabilities of combined arms forces.

In fact, there was opposition among senior leaders to the notion of armored exploitation of



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German armored car in Bavaria.

breakthroughs until the Polish and French campaigns. Future field marshal Gerd von Rundstedt commented to Guderian during an exercise with armored units, "All nonsense, my dear Guderian, all nonsense." Yet within his skepticism there was a willingness to adopt what was useful and possible. The occupation of Austria in 1938 saw considerable difficulty with deploying mechanized forces; nevertheless the army built on that experience to improve its fledgling armored forces.

The Germans also used wargames to experiment with mechanized formations. In summer 1935, before the army possessed its first armored division, Beck studied the uses of armored corps in paper exercises. Thus by late 1935, when ar-

mored divisions were just beginning to be formed, Beck recommended using panzer divisions against long-range objectives as

well as an independent force "in association with other motorized weapons."³ And, in 1936, the general staff considered utilizing a panzer army in war.

Yet it was not until the Polish campaign that a substantial number of senior officers became convinced that the rapid exploitation of mechanized forces offered real possibilities. In Poland the highest level at which Germany employed panzers was corps. This was also true in the following year in France. It was only during the invasion of the Soviet Union that panzer armies appeared.

The underlying German approach to experimentation was keeping options open rather than closing them. Experimentation elucidated the possible, and everything was rigorously evaluated to include combat lessons learned analyses.

The aim was not to make the organization look good or even to identify who failed, but to learn.

From the Top Down

No army was as influenced by World War I as the French. Casualties, which totalled over a million and a quarter dead, exercised a baleful influence over civilian as well as military leaders. But France did not make an extensive study of the conflict. Influenced by its heavy losses in the many failed offensives of the first three years of the war, the army concentrated on the successes of summer and fall 1918, particularly First Army operations conducted by General Eugene Debennet. Because Debennet became the director of the war college, selection of First Army experiences was hardly surprising, but it did not contribute to a full understanding of tactical and operational issues. In August 1918, with careful articulation of firepower, limited infantry advances, and tight exercise of command and control, Debennet scored a significant success against the Germans with relatively light losses. But in no sense were his attacks typical, even in 1918.

Nevertheless, heavy German casualties in spring 1918—nearly a million in a period of four months—did not make exploitation tactics enticing to the French. In fact, the disaster in 1940 was caused by a consistent refusal to believe that the Germans could move with the speed their doctrine called for. As the French historian and reserve officer Mark Bloch observed in 1940:

Our leaders, or those who acted for them, were incapable of thinking in terms of a new war. . . . The ruling idea of the Germans in the conduct of war was speed. We, on the other hand, did our thinking in terms of yesterday or the day before. Worse still: faced by the undisputed evidence of Germany's new tactics, we ignored, or wholly failed to understand the quickened rhythm of the times. . . . Our own rate of progress was too slow and our minds too inelastic for us ever to admit the possibility that the enemy might move with the speed which he actually achieved.⁴

France did not adopt the iterative approach of the 57 committees organized by Seeckt nor conduct a wide ranging examination of what went right and wrong during World War I. Leaders who were bent on imposing their views on the army did not create an atmosphere that encouraged debate. The commander in chief throughout the late 1930s, General Maurice Gamelin, established the high command as the sole arbiter of doctrine early in his tenure. From that point, all articles, books, and lectures produced by serving officers required command approval. As one officer later noted, "everyone got the message, and a profound silence reigned until the awakening of 1940."⁵

France did not make an extensive study of the conflict

Foreign observers in French Alps, 1937.



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The pace of German rearmament under the Third Reich admittedly alarmed France, though intelligence exaggerated its speed. Nevertheless, there was little interest in foreign writers, even while Germany paid attention to thinkers such as J.F.C. Fuller and B.H. Liddell Hart either directly or indirectly. Both chauvinism and official dicta stifled interest in such influences.

In the event, French doctrine stressed tight control, with artillery dominating all operations. Manuals emphasized that firepower provides "a remarkable strength of resistance to improvised fortifications." The army would only go on the offensive under "favorable conditions after the assembling of powerful material means, artillery, tanks, munitions, etc."—a recipe for disaster.

Looking Good

Some historians may contend that inordinate emphasis on firepower prevented the French from understanding how improvements in tactical mobility, coupled with techniques

that originated in German infiltration tactics of World War I, could overturn accepted and combat-tested methods. The concept of a tightly controlled and centralized battle belonged to another era, and the sense of chaos and futility that emerged after the performance of the French in 1940 revealed an inability to force its method of fighting on the Germans.

Although some claim that this state of affairs arose because of doctrinal predilections, there is more to the story. The French approached experimentation in the same fashion as their doctrine and concepts of war. The purpose of these undertakings was not to test ideas but to prove the preconceived notions of those who authorized experiments and field trials.

The high command proved slow in establishing even relatively modest experiments such as creating an armored division. Through the late 1930s interminable discussions took place on the higher levels, with Gamelin invariably arguing that such proposals needed further study rather than precipitating action. The result was that while proposals for experiments with mechanized forces appeared regularly on meeting agendas, the

French cavalry on patrol.



National Archives

French did not establish their first armored division until December 16, 1939—two and a half months after the Polish catastrophe. There were admittedly problems with tank production, but such issues were no more daunting than those confronting the Germans. It was the will to move in new directions that was lacking.

French exercises and experiments were highly stylized and scripted. Their top-down nature is suggested by the fact that Gamelin forbade maneuvers with medium tank units unless a member of the high command was present.

The September 1930 maneuver in Lorraine typified a system which placed a mechanistic approach at the heart of everything the army did. The German attaché acidly commented that

the “infantry did not know how to attack.” Even Gamelin had to admit that the exercise was “not an attack but a funeral procession . . . the infantry following the tanks like hearses.”⁶ French interwar attitudes towards experimentation carried over into the conflict. The army spent relatively little time over the winter of 1939–40 training to

meet the coming challenge; equally important was a general unwillingness to learn from the defeat of the Polish army in September 1939.

Exercises on both sides of the Rhine in 1937 underlined differences between the opposing forces. French maneuvers, highly scripted with top-down control, offered little latitude for initiative by subordinate commanders. Moreover there was scant emphasis on unit testing. On the other hand, foreign observers came away from German maneuvers either terrified or impressed. The British sensed the energy and drive of the German army to test the organization to the breaking point under realistic conditions. The exercise force largely consisted of infantry and artillery, but the stress on combined arms tactics was thoroughly modern.

Tragic Misdirection

In the interwar period the Royal Air Force (RAF) conducted experiments that should have been alarming. Aerial combat during the Spanish Civil War suggested that air superiority would be critical in the next war. But there was admittedly no way of testing the vulnerability of bombers to fighters. Moreover the British displayed little interest in learning from others about either air-to-air combat or bombing accuracy. The most glaring

in the interwar period the Royal Air Force conducted experiments that should have been alarming



**Wellington bomber
during training
exercise.**

Courtesy U.S. Air Force History Office

problem arose in evaluations of RAF experiments with bombers throughout the 1930s. Target identification and bombing accuracy remained issues until the outbreak of World War II. In May 1938 the assistant chief of air staff admitted:

It remains true . . . that in the home defense exercise last year, bombing accuracy was very poor indeed. Investigation into this matter indicates that this was probably due very largely to failure to identify targets rather than to fatigue.

Asked in the early thirties how air crews would locate targets at night or in bad weather, future Air Marshal Arthur Tedder replied derisively, "You tell me!"

Experiments generally tested little. As the official historians of Bomber Command noted:

Thus, the Bombing Committee [established to consider bombing accuracy] had to rely on the trials at the armament training camps and theoretical reasoning. But the trials provided no test for the identification of a target. They were often made at levels which

would be impossible in wartime against defended targets. They took place in daylight and in good weather. There were hardly any tests as to what could be done at night or in cloudy weather. Under these conditions some squadrons were able in practice to produce a high degree of accuracy. But in the large scale exercises which approached more closely to war conditions, their deficiencies were exposed. . . . The Manual of Air Tactics contained minute instructions on the various kinds of bombing, special attention being given to high-level bombing in daylight. Most of this was necessarily based on theoretical reasoning since there had been so little practical experiment.⁸

Some within Bomber Command recognized the extent of the problem. In May 1939 the commander of 3 Group admitted that, according to experimentation, crews could at best bring their aircraft within fifty miles of targets by dead reckoning. But for the most part the RAF leadership were in denial. The rejection was so strong that it took the devastating analysis of the Butt Report in 1941 (after nearly two years of war) to indicate that barely a third of crews were getting

within five miles of their targets (an area of no less than 75 square miles). Confronted with the possibility that the government might suspend the strategic bombing offensive, Bomber Command got interested in a broader definition of technology than simply having faith that the bomber would get through.

This definition had consequences for areas other than bombing accuracy. In March 1940 Air Marshal Sir Hugh Dowding advised the Air Ministry that Bomber Command would need long range escort fighters to execute a strategic bombing campaign against Germany. He received the following reply:

It must generally speaking be regarded as axiomatic that the long-range fighter must be inferior in performance to the short-range fighter. . . . The question has therefore been considered many times, and the discussion has always tended to go in circles. . . . The conclusion has been reached that the escort fighter was a myth. A fighter performing escort functions would, in reality, have to be a high performance and heavily armed bomber.

One year later Prime Minister Winston Churchill asked the same question and received a similar reply from the Chief of Air Staff, Air Marshall Sir Charles Portal. Churchill stated that this response "closed many doors."

The top-down RAF approach constrained experimentation to such an extent that only some of the possibilities were examined. Experiments were carefully circumscribed to support doctrinal preconceptions that bordered on the ideological. This situation not only resulted in a force largely irrelevant to events in 1939, but one that only adapted after extraordinarily heavy casualties.

A number of points can be drawn from the experimentation in the 1920s and 1930s. First, it appears that top-down leadership usually resulted in flawed experimentation. Though innovation requires support from the top, experiments and exercises must test precepts and conceptions. Top-down leadership breeds institutional biases against ideas emerging from below. Such an approach leads to experiments that confirm revealed doctrine rather than provide objective testing.

Second, effective innovation requires an identifiable enemy. Germany intended to fight both Poland and Czechoslovakia and eventually France. When enemies remain undefined, it is difficult to develop a coherent concept to fit national strategy or even the next war.

Third, both experimentation and innovation must be historically connected to the recent past as well as understanding the unchanging nature of war—that fog, friction, and ambiguity will interfere with the conduct of operations regardless of technological advances. Military institutions that distorted or failed to examine recent battles ran into substantial problems in the interwar period. Their experiments failed to address real issues. Moreover, militaries that entirely rejected history based their doctrines and conceptions on fallacious technological assumptions. Those suppositions drove experiments in irrelevant directions, and lessons that might have been learned were ignored.

Finally, military culture was integral in developing realistic and effective experiments that examined the potential of innovation and exercises that contributed to the process. It had to be receptive to learning from tests and drills. Not surprisingly, a culture that encouraged critical study of even the most closely held beliefs innovated most intelligently. The creation of feedback loops depended on honesty and a sense of the importance of learning. Those who valued looking good rather than demanding rigor may have achieved their goals in the short term but paid in blood for their shortsightedness over the long term once war came.

JFQ

NOTES

¹ James S. Corum, *The Roots of Blitzkrieg: Hans von Seeckt and German Military Reform* (Lawrence, Kan.: University Press of Kansas, 1992), p. 37. Seeckt posed the following questions to the committees: "What new situations arose in the war that had not been considered before the war? How effective were our prewar views in dealing with the above situations? What new guidelines have been developed from the use of new weaponry in the war? Which new problems put forward by the war have not yet found a solution?"

² Robert J. O'Neill, "Doctrine and Training in the German Army," in *The Theory and Practice of War*, edited by Michael Howard (New York: Praeger, 1966), p. 157.

³ Wilhelm Deist, *The Wehrmacht and German Rearmament* (Toronto: University of Toronto Press, 1981), pp. 42–43.

⁴ Marc Bloch, *Strange Defeat* (New York: Norton, 1968), pp. 36–37, 45.

⁵ Andre Beaufrère, *1940: The Fall of France* (New York: Praeger, 1968), p. 47.

⁶ Eugenia C. Kiesling, *Arming Against Hitler: France and the Limiting of Military Planning* (Lawrence, Kan.: University Press of Kansas, 1996), p. 139.

⁷ Guy Hartcup, *The Challenge of War* (London: Brassey's, 1967), p. 126.

⁸ Charles Webster and Noble Frankland, *The Strategic air Offensive Against Germany*, Vol. 1 (London: Her Majesty's Stationery Office, 1961), pp. 117–18.

Two Hats



M-1A1 during
Persian Gulf War.

out of joint

for the Joint Force Commander?

By DAMIAN J. McCARTHY and SUSAN A. MEDLIN

DOD

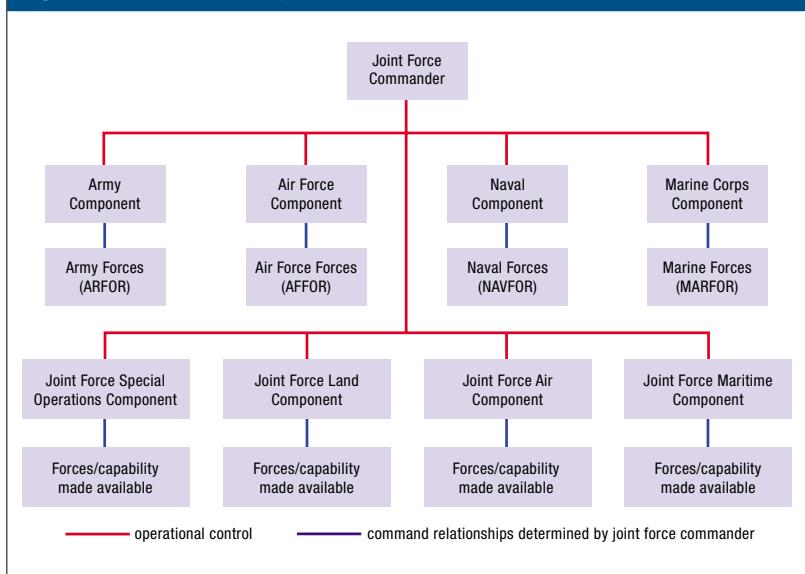
Although the Persian Gulf War was waged a decade ago, it should continue to be studied. Joint doctrine has not resolved many contentious issues raised during that conflict. Among them is whether a joint force commander (JFC) should be dual hatted as a service or functional component commander. The following article assesses doctrine for organizing both joint force and component commands. It then considers organization for Operations Desert Shield/Desert Storm. Finally, it examines the ground operations planned

and executed in 1990 and 1991. The campaign presented the Commander in Chief, Central Command (CINCENT), with challenges that could have been avoided with a more dynamic theater command and control structure and prescriptive doctrinal guidance.

Joint Doctrine

Subordinate forces can be organized in many ways. Joint Pub 0-2, *Unified Action Armed Forces (UNAAF)*, declares that "a JFC has the authority to organize forces to best accomplish the assigned mission based on the concept of operations." JFCs can establish functional component commands and designate commanders (see figure 1, Possible Components in a Joint Force). The primary factors in selecting a functional component

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Figure 1. Possible Components of Joint Force

commander are the nature of operations, service force mix, and service command and control capabilities. Usually the service with the preponderance of forces provides the functional component

commander. Joint Pub 3-0, *Doctrine for Joint Operations*, further defines conditions under which JFCs establish a functional component as when "the scope of operations requires that similar capabilities and functions of forces from more than one serv-

ice be directed toward closely related objectives and unity of command and effort are primary considerations." Joint Pub 3-0 concludes its consideration of the organization of forces with three statements:

- Most often, joint forces are organized with a combination of service and functional components with operational responsibilities.
- Joint forces organized with Army, Navy, Marine Corps, and Air Force components will still have Special Operations Forces organized as a functional component.
- JFCs will normally designate a joint force air component commander (JFACC), whose authority and responsibilities are defined by the establishing JFC based on the JFC's concept of operations.

Joint Pub 3-0 includes figure 1 above, which is also used in Joint Pub 0-2 as an example only of how to organize a joint force.

Joint doctrine provides no recommendation, except for JFACCSs, on designating functional components. Joint Pub 1-02, *Department of Defense Dictionary of Military and Associated Terms*, defines joint force land, maritime, air, and special

operations component commanders, but only in regard to JFACCSs does it state that "the joint force commander will normally designate a joint force air component commander." If JFCs do not designate a functional component commander they are effectively in control of this function and dual hatted. For example, if JFCs decide not to designate a joint force land component commander (JFLCC) but employ both Army and Marine Corps units through maritime and Army forces commanders, they provide unity of effort between the forces and act as both JFC and JFLCC.

Commanding the Storm

The coalition organized in the Persian Gulf consisted of forces from 33 nations, presenting General Norman Schwarzkopf, USA, CINCENT, with serious difficulties for command and control. For political reasons, Schwarzkopf agreed upon a parallel command structure, with the Arab forces under Lieutenant General Khalid bin Sultan of Saudi Arabia acting as Commander, Joint Theater of Operations. According to one assessment, by allowing Khalid to wield authority over what would become known as Joint Arab Task Force, "Schwarzkopf at once lightened his own overburdened workload and smoothed relations with the Saudis."¹ Moreover, CINCENT organized theater air components under a functional command and named Lieutenant General Charles Horner, Commander of U.S. Central Air Force, as JFACC to provide centralized planning, decentralized execution, and the integration of both service and allied air capabilities.

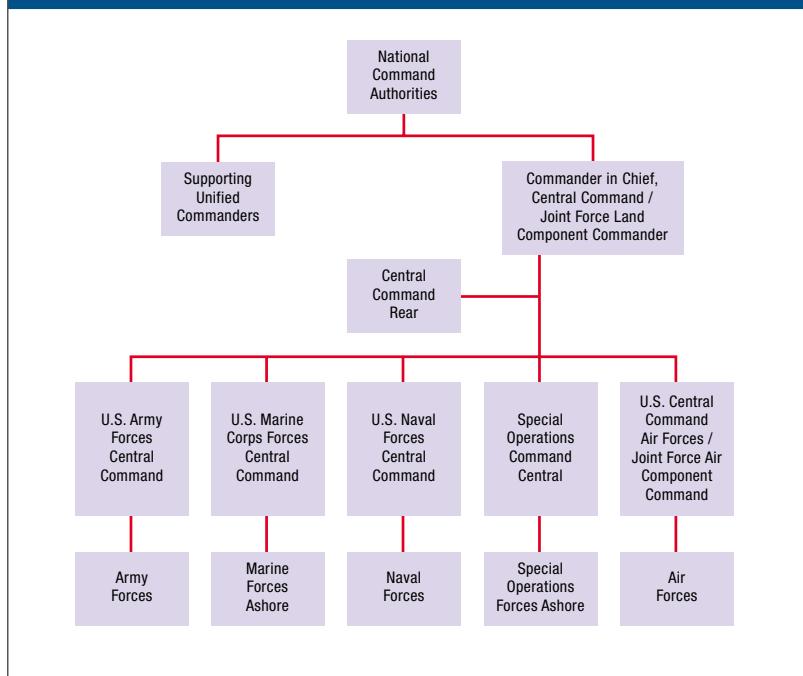
Given the magnitude of CINCENT responsibilities, naming a joint force land component commander would have enhanced the unity of effort. Schwarzkopf was conscious that his span of control could be overextended by his many tasks: "I found myself mired in administrative chores: briefing congressional delegations, giving press interviews, heading off cultural problems with the Saudis, and fielding bureaucratic questions from Washington."² General Colin Powell, USA, the Chairman of the Joint Chiefs of Staff, repeatedly suggested that Schwarzkopf establish an overall commander for ground forces, fearing that the land offensive was consuming too much time and energy on the part of CINCENT.

But Schwarzkopf decided to retain JFLCC responsibilities. It was not politically possible to put Arab forces under U.S. control or the preponderance of U.S. forces under Arab command. CINCENT was also reluctant to create another major staff headquarters, which would be required to control both Army and Marine Corps



DOD (Jose D. Trejo)

Figure 2. U.S. Command Relationships



forces, and perhaps Arab forces as well. Instead, Lieutenant General John Yeosock, USA, Commander of Third Army, would oversee the two U.S. corps along with French and British forces (U.S. command relationships are shown in figure 2).

As JFLCC, Schwarzkopf had control over the Marine Corps and the option of bypassing Yeosock and going straight to corps commanders. This created numerous demands. Yeosock had to

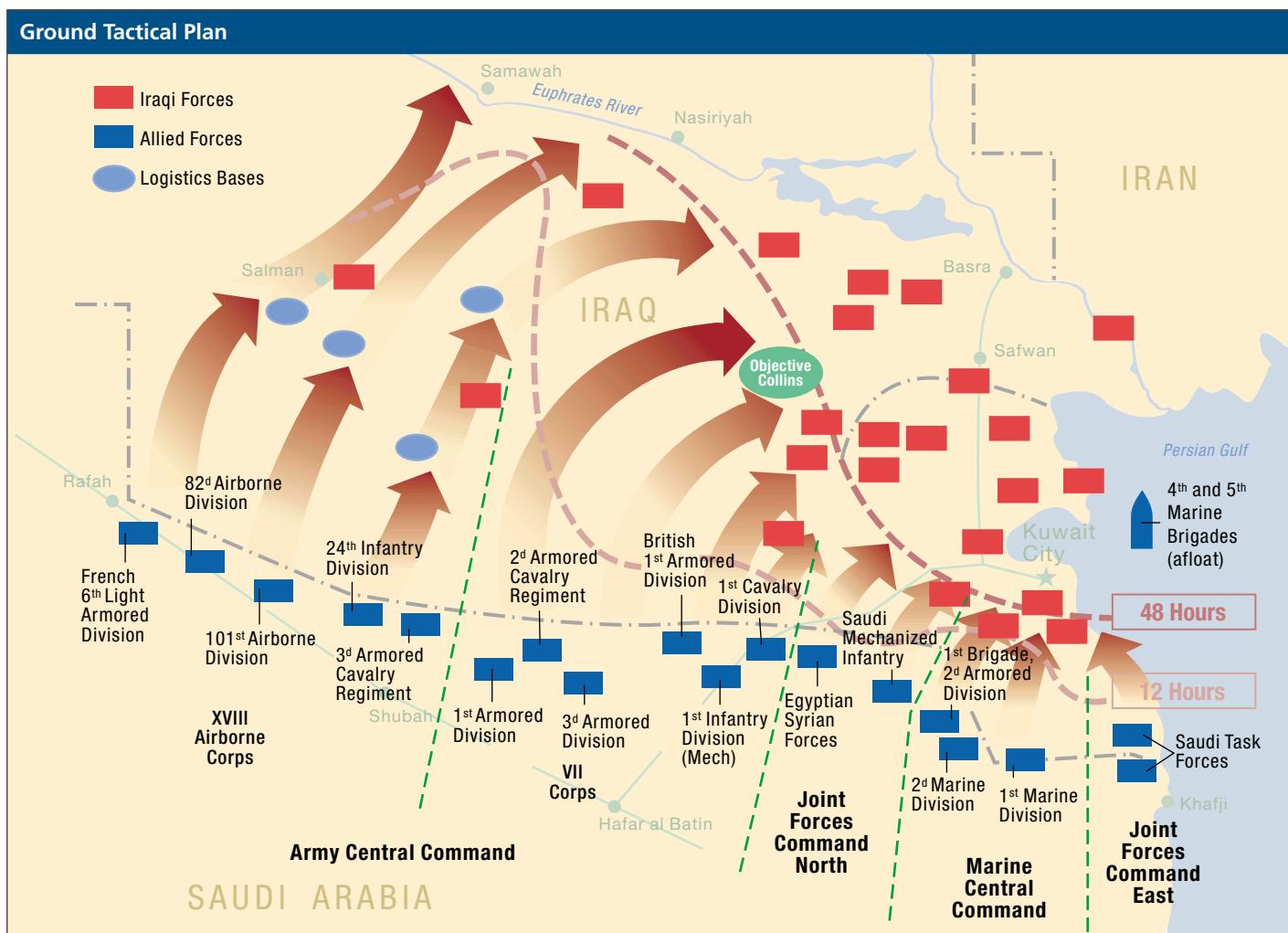
compete with both the Marine Corps and Arabs for attention from CINCCENT. "This rather convoluted arrangement certainly went against the principles of simplicity and unity of command," according to one official history. "That it was made to work as smoothly as it did was attributed to the powerful personalities and professionalism of the senior commanders."³

The Scheme of Battle

Schwarzkopf had devised a plan whereby VII Corps would make the main attack. On the right flank, the Joint Arab Task Force and Marines began the offensive with artillery and naval gunfire, while 4th Marine Expeditionary Brigade feinted an amphibious landing off the coast of Kuwait. The Arab and Marine attack into Kuwait would fix the enemy in position and distract it from the flanking maneuver in the west. On the left flank, XVIII Airborne Corps would conduct simultaneous ground and air assaults. VII Corps would start the main attack 24 hours after the offensive began, breaking through the weak western part of the enemy line to reach the rear of the forward enemy forces in Kuwait, attack their flank, and destroy three Republican Guard divisions in southern Iraq. On the left flank, the 24th Mechanized Division would support the attack forward to the Euphrates and block the Iraqi retreat.

Disconnects between the Army and Marine battle plans appeared as planning for the ground offensive evolved. The Marine Corps had originally conceived an amphibious assault on a port south of Kuwait City (rejected by Schwarzkopf), and a deliberate attack toward Kuwait City to fix and distract enemy forces. The poor performance of the Iraqis at Khafji led the Marines to believe that the enemy was vastly overrated. Major General William Keys, the 2^d Marine Division commander, pushed for an accelerated tempo as found in his war plan. He believed that "the way to win a quick victory and hold down losses was to push as much combat power through the enemy fortifications as fast as possible, bypassing enemy pockets of resistance and thrusting into the enemy rear."⁴

The Marines ended up with a two-pronged attack: the 1st Division would conduct a supporting attack on the right while the 2^d Division carried out the main attack on the left, punching through the Iraqi forces and racing north to seize the high ground west of Kuwait City. This would cut off the escape route for the forces in the urban center and southern Kuwait. General Walter Boomer, the Commander of U.S. Marine Forces Central Command, estimated that his forces would arrive in Kuwait City within three days.



By contrast, the Army commanders, Yeosock and Lieutenant General Frederick Franks, of VII Corps, focused on a methodical attack where available combat forces were massed to deliver maximum power. Franks was determined to mass three divisions before taking on the Republican Guard. He was particularly concerned about any scheme that would leave his forces

as a holding force.⁵ Schwarzkopf was concerned about the plan. He thought it overly cautious, with emphasis on advance, stop, regroup, advance, stop, regroup. CINCCENT iterated his intent for the ground offensive.

I do not want a slow, ponderous pachyderm mentality. This is not a deliberate attack. I want VII Corps to slam into the Republican Guard. . . . The idea is not to get to intermediate objectives and then stop to rearm and refuel. If you have divisions sitting around, you will present a huge target for chemicals and you will lose. You cannot have VII Corps stopped for anything.⁶

Schwarzkopf was right. As one observer notes, the attack by VII Corps "was, by design, deliberate and cautious . . . clearly designed for evading risk of any disorganization while the corps won maneuver room. The cost of that care was obviously paid in time."⁷

the Army commanders focused on a methodical attack where available combat forces were massed

strung out with a piecemeal, one-unit-at-a-time attack on a narrow front.

When Secretary of Defense Richard Cheney arrived in Riyadh with Powell to review the ground offensive on February 8, 1991, there was "an opportunity to iron out the disconnects among the services. But even senior commanders gave little thought to how an accelerated Marine attack might affect execution of the Army plan. Whatever the Marine Corps did, they were seen

The Storm in Action

The JFACC arrangement under Horner worked fairly well. Coalition aircraft flew 109,976 sorties, dropped 88,500 tons of bombs, and shot down 35 enemy aircraft. By appointing a joint force air component commander Schwarzkopf achieved unity of effort in air operations though not without controversy. Since Horner had no functional ground counterpart, each service component had to make a case for air support individually during the campaign. The Army, in particular, felt slighted, believing it lacked adequate representation during planning.

Despite problems with targeting as well as tactics and procedures, the overall air component mission was successful and set the conditions for the land battle. The ground campaign began on February 24. The initial Marine distraction turned into breakthroughs as they pierced enemy front lines in several places. Reports indicated only minor firefights, with few casualties and growing numbers of prisoners. Schwarzkopf was faced with a decision. If he stayed with the original plan and launched the main attack in 24 hours, the Marines moving forward on the right flank might

Schwarzkopf believed that VII Corps would push forward throughout the night, closing on Objective Collins in the morning. The goal, a flat desert area west of the main Republican Guard positions, would serve as a jumping off point for an attack on those enemy divisions. However, Franks worried that his forces would run out of daylight before completing their move through the breach in enemy lines, clearing minefields, and marking passage lanes. As the attack progressed into evening, a 20-kilometer gap opened between lead units and armored divisions moving through the breach. Franks decided to halt after informing Yeosock. "I advised him that we would more than likely suspend offensive operations for the night but would continue other combat operations such as aviation and artillery, as well as finish the passage of the remainder of the two armored divisions across the berm. . . . We would then resume offensive operations at first light."⁸

Yeosock didn't tell Schwarzkopf of this plan. As a result, Schwarzkopf made no attempt to slow down either the Marine offensive on the right flank, which was advancing rapidly toward Kuwait City, or the 24th Division, which had pushed hard through the night on the left flank, penetrating over 60 miles into Iraq by morning.

Early on February 25, Schwarzkopf was surprised to learn VII Corps had halted. He was beginning to see the campaign as shifting from deliberate attack to exploitation and was concerned over the methodical advance of VII Corps, fearing that the enemy might escape the trap. "I began to feel as if I were trying to drive a wagon pulled by race horses and mules."⁹ He ordered the 24th Division to slow its advance because of the disconnect with VII Corps, which continued to attack throughout the day (like other coalition forces) yet again stopped for the night, some 20 miles short of the objective.

On the next morning, Schwarzkopf learned that the enemy was beginning to retreat from Kuwait City. He was appalled to find that only a few elements of VII Corps had reached Objective Collins. He called Yeosock and expressed dismay, "John, no more excuses. Get your forces moving. We have got the entire . . . Iraqi army on the run. Light a fire under VII Corps."¹⁰

As the day unfolded it became clear Republican Guard divisions were organizing a retreat. Schwarzkopf then removed the brakes from the 24th Division, ordering it to push forward and seal off the Euphrates Valley. That day, Yeosock reported to Schwarzkopf that VII Corps had finally reached Objective Collins and would attack as soon as the armored divisions were on line.



DOD (Dean Wagner)

Lieutenant General Horner with Saudi squadron commander.

be exposed to counterattack. Early success could also spook the enemy, causing it to retreat before coalition forces could encircle and destroy it.

After speaking with Yeosock and Khalid, Schwarzkopf decided to launch the main attack in the afternoon. The only dissenting opinion came from the Commander, Joint Arab Task Force, on the left flank of VII Corps, who was unable to react quickly to the change in plans. Schwarzkopf was willing to accept that risk as long as VII Corps was ready. Late that afternoon the main attack was launched.

M-60A1 with mine-clearing devices leads AAVs into Kuwait.



Yeosock called Franks and said that Schwarzkopf was unhappy with his progress. According to Franks, this was the first that he heard of this criticism. That afternoon VII Corps began engaging the westernmost elements of the Tawakalan Republican Guard Division.

divisions, retreating toward Basra. Coalition forces continued to pound Iraqis moving north from Kuwait City. In midafternoon the corps cut through the Medina Republican Guard Division, and a remaining division, the Hammurabi, was on the run. Yeosock reported that this division would be destroyed in the next 24 hours.

Powell contacted Schwarzkopf later that afternoon and reported that the pressure to declare a cease-fire was increasing. Kuwait was essentially liberated, and media coverage of mounting Iraqi casualties was making the White House uneasy. Schwarzkopf asked for another day to destroy the Republican Guard. The Chairman relayed his concern to President George Bush and called Schwarzkopf again to report that the President contemplated declaring a cease-fire in six hours. Bush declared it at midnight on February 27. Kuwait was liberated with minimal coalition casualties. However, Schwarzkopf failed to achieve one major objective, destruction of the Republican Guard. As later analysis revealed, the Hammurabi Division escaped largely intact, as did senior Iraqi officers.

Powell contacted Schwarzkopf and reported that the pressure to declare a cease-fire was increasing

Franks then reported to Schwarzkopf. Each man gives a different account of this conversation, with Schwarzkopf claiming that he had to push Franks to attack east into the Republican Guard. By contrast, Franks has said that he discussed his progress and future plans and that Schwarzkopf was pleased. To further complicate matters, international pressure was mounting for a cease-fire, and Schwarzkopf knew that the opportunity to destroy the enemy was beginning to disappear.

On February 27 the Joint Arab Task Force liberated Kuwait City. VII Corps reported that it had destroyed the Tawakalan Republican Guard Division overnight and were pursuing the other two

Marines entering Kuwait airport.



DOD (David McLeod)

Enemy vehicles in Euphrates valley.



DOD (Dean Wagner)

In large part, the failure to complete the destruction of the Republican Guard was caused by communication and synchronization problems on the ground. The most serious breakdown in the chain of command occurred between Franks and Schwarzkopf. The former was fully engaged in making contact with the enemy as the latter began to demand a pursuit. It was Yeosock's task to reconcile the conflicting views, to either get Franks to move faster or Schwarzkopf to slow down. His failure to do so exacerbated the problem.

As JFLCC, Schwarzkopf was responsible for the synchronization of the ground campaign. But, as one critic noted, he allowed "each service to attack the way it preferred, with little thought about how an attack in one area would affect the fighting in another."¹¹ Thus the early success of

the Marine Corps caused the main attack to be advanced on very short notice.

Although Schwarzkopf expressed concern over the way Franks viewed the battle during the planning process, he did little to change it. He conveyed his reservations to both Franks and Yeosock before the ground offensive, but he did not remove either one from command; nor did he send either Yeosock or Lieutenant General Calvin Waller, USA, the Deputy CINC, forward during the ground campaign. Instead, from headquarters in Riyadh, he was continually surprised by the slow advance of VII Corps. Together with Yeosock and Franks, Schwarzkopf must accept some responsibility for the escape of the Hammurabi Division, because as joint force commander he was ultimately accountable for the supervision of ground operations.

Reflections on Command

As Desert Storm has demonstrated, problems arise when JFCs are dual hatted as functional component commanders. One problem is

focus. Can a single commander pay adequate attention to critical, immediate, diverse responsibilities? Schwarzkopf confronted many issues both before and during the ground attack. Prior to the counteroffensive he supervised every aspect of coalition, joint, and land component force planning as well as dealing with sensitive issues from international politics to media relations. Once combat operations began he was engaged in the actual land battle as well as conflict termination. Where was his attention needed the most—on the fighting at the front or on Washington and terminating the war? As JFC and JFLCC he had to deal with competing priorities personally and simultaneously.

The second problem is another consequence of dual hatting: where does a JFC staff focus, on the JFC mission or JFLCC issues? Schwarzkopf stated that he did not want another staff, but this meant that the JFC staff had to support him in both roles. Perhaps JFCs with decades of experience could function as JFC and JFLCC, but will their staffs have call on the same level of expertise? Can one staff have the resources for both functions? Even if Schwarzkopf was not overtasked in his dual roles, problems of synchronization in the ground battle suggest that his staff was unable to provide the assessments required for decisions based on unfolding events.

Another consideration is integrating operations among functional components. If there is no joint force land component commander or staff then there can be no lateral communication with the joint force air or special operations component commanders or their staffs. In addition, if JFCs are dual hatted there is a subordinate relationship with these component staffs. For example, had there been a JFLCC to address apportionment with a JFACC, the commanders might have been able to resolve issues before appealing to JFC. But the corps commander essentially had to skip a level of command and bring component issues to JFC. Schwarzkopf attempted to ameliorate this problem by using Waller to resolve cross-functional problems. But this solution suffered from the same drawbacks as Schwarzkopf faced himself—competing priorities and a lack of the dedicated staffs to deal with intractable joint issues. Ground commanders can address JFCs as JFLCCs, but they will always be JFCs just as their staffs will always be JFC staffs. If, for example, CINCCENT had appointed a JFLCC, the Army may have felt it had a

stronger voice in the prioritization of the air effort and the design and conduct of the overall campaign during Desert Storm.

The Gulf War was successfully executed. But its shortfalls also provide valuable food for thought. The issue of dual hatting is one case in point. There may never be another Desert Storm, but there will certainly be occasions when a decision will be made to dual hat JFCs as functional component commanders. Any operation on the scale of Desert Storm will inevitably present similar challenges. Given the capabilities of the Armed Forces, the necessity of conducting coalition operations, and the probability that future campaigns will call for high tempo, simultaneous activities, JFCs will require a strong command network. Plans should be made for sufficient staff support, theater assets, and service capabilities. The operational reach of JFCs must not be limited by a paucity of theater assets that prevent the establishment of supporting functional commands. A more dynamic theater command system must be matched by better doctrine on JFLCC operations and perhaps even a prohibition against dual hatting CINCs in large-scale contingency operations where greater efficiencies can be found in effective and responsive functional commands. **JFQ**

NOTES

¹ Roger Cohen and Claudio Gatti, *In the Eye of the Storm* (New York: Farrar, Straus, and Giroux, 1991), p. 221.

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³ Office of the Chief of Staff, U.S. Army, *Certain Victory: The U.S. Army in the Gulf War* (Washington: Government Printing Office, 1993), p. 141.

⁴ Michael R. Gordon and Bernard E. Trainor, *The Generals' War: The Inside Story of the Conflict in the Gulf* (New York: Little, Brown and Company, 1995), p. 291.

⁵ *Ibid.*, p. 305.

⁶ Schwarzkopf and Petre, *It Doesn't Take a Hero*, pp. 433–34.

⁷ Richard M. Swain, *Lucky War: Third Army in Desert Storm* (Fort Leavenworth, Kan.: U.S. Army Command and General Staff College Press, 1994), p. 335.

⁸ Tom Clancy and Frederick M. Franks, Jr., *Into The Storm: A Study in Command* (New York: G.P. Putnam's Sons, 1997), p. 279.

⁹ Schwarzkopf and Petre, *It Doesn't Take a Hero*, p. 456.

¹⁰ *Ibid.*, p. 461.

¹¹ Gordon and Trainor, *The Generals' War*, p. 432.



Lieutenant General Yoesock.

DOD (Pedro Yanez)



Japanese heavy cruiser *Mikuma* at Midway.

Operational Overreach and the Culmination Point

Naval Historical Center

By MILAN N. VEGO

Probably no concept of operational art is as complex as culmination. In an article entitled "Why Strategy Is Difficult" that appeared in these pages in Summer 1999, Colin Gray discounted the utility of the concept of culminating points. Yet despite its problematical nature this element of operational theory has demonstrated utility in explaining the conduct of campaigns and will remain an essential construct for understanding future wars.

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Application to Levels of War

Culmination did not receive proper attention until operational art was revived during the late 1970s and early 1980s. Since then, the Army has given more attention than other services to the concept. Nevertheless, it is applicable to all functional, joint, and combined operations.

The notion of a culmination point is identified with Carl von Clausewitz, who described it as the moment when "the remaining strength is just enough to maintain a defense and wait for peace." Once past, the chance of victory would be foreclosed unless an enemy yielded without engaging in decisive combat. An enemy would prevail if it chose to fight. Culmination could be



Courtesy NDU Special Collections

Battle of the Bulge.

characterized as a point reached by attackers or defenders in terms of time and space after which stated objectives can't be accomplished, and continued efforts to reach them would significantly heighten the risk of failure or defeat. This point is reached when there is a decisive shift in relative combat power.

A point of culmination exists for both attackers and defenders on every level of war. The

lower the level, the easier it is to determine. The higher the level, the more complex the influences that cause a culmination of friendly and enemy combat power. Thus a culmina-

tion point for either side is difficult to anticipate on the operational or strategic level because of the factors affecting it.

Tactical culmination occurs in the course of a major engagement. It is caused by actions on the scene or decisions on higher levels. Culmination principally relates to the direct application of combat power, which is normally reduced if not regenerated in timely fashion during battle. Failing rejuvenation, a tactical force must stop its actions or continue to fight and risk failure. If a force can prevent or postpone culmination but opts against it, that force facilitates its own culmination.

On the operational level culmination may occur during a major operation or at a given point in a campaign. In the course of a campaign several

culminating points can take place in sequence or simultaneously. Hence possession of the superior position can wax and wane as commanders adjust to the loss of critical capabilities or gain new advantages as combat operations progress.

Strategic culmination arises in the course of war and can be reached only once. In strategic culmination, focus is placed on forces available in the future rather than those on hand. Thus the point arrives when a favorable ratio of military and nonmilitary resources has diminished until the chances for a successful outcome are foreclosed and attackers go on the defensive or risk defeat.

Relationships

Culminating points on various levels of war can affect each other in profound ways. One on a lower level almost invariably affects one on the next higher level. Sometimes a culminating point on the tactical or operational level has operational or strategic implications. For example, the German failure in the all or nothing counteroffensive in the Ardennes during December 1944 had far-reaching strategic consequences. The operational objective was to seize the port of Antwerp by splitting and then destroying Allied forces in the northern and southern sectors of the Ardennes. The Germans planned to commit 28 to 30 divisions—including 12 panzer or panzer grenadier—in a surprise move toward the Meuse River and proceed without delay toward the coast. They hoped to split 1st U.S. Army and British 21st Army Group and destroy them near Antwerp and Brussels. Adolph Hitler wanted to derail the Allied timetable for the thrust into Germany to allow the bulk of his forces in the west to move eastward to defend against the Soviets. The offensive began on December 6 and had some tactical gains. However, it began to lose momentum due to ammunition and fuel shortages. Because of steadily rising losses, Hitler finally admitted on January 8 that the offensive had failed. In the process the Germans lost 100,000 men, 800 tanks, and 1,000 aircraft that could not be replaced, opening the door for the final Allied push into Germany.

Another form of interaction is when attackers or defenders overshoot the culmination point on the higher level by inflicting a major defeat on the next lower level. This is likely when battles result in significant losses in offensive power, thus weakening gains from a previous operation or campaign. For example, the Battle of Midway in June 1942 was an operational victory for Allied forces and an operational defeat with strategic consequences for the Japanese, who lost four large carriers, 332 aircraft, and their best pilots. From then on the strategic initiative shifted steadily.

British tank crews in North Africa.



National Archives

Recipe for Defeat

Arrival at the point of culmination can be caused by various factors. On the tactical level, attack or defense can be temporarily overextended by exhaustion on the part of commanders and their forces or depletion of supplies. Among other things, this problem could be solved by simply replacing the commander or entire units, sending reinforcements, or rushing in provisions.

A common cause of culmination on the operational level is the pursuit of multiple objectives without regard for space, time, and force. For example, the decision made by Hitler in July 1942 to pursue two operational objectives simultaneously (the Caucasian oilfields and Stalingrad), which were in divergent directions, was the principal reason for the defeat at Stalingrad and subsequent turning point of the war on the Eastern Front. Hitler specified that the task of Army Group A was to encircle and destroy Soviet forces southwest of Rostov-on-Don and seize the east coast of the Black Sea, thereby taking out the Black Sea Fleet. At the same time fast units would protect the eastward flanks and seize the area around Grozny and block the Ossetian and Georgian roads. Finally,

the group would sweep along the Caspian Sea and capture Baku. Army Group B would build up its defenses on the Don River and thrust toward Stalingrad and destroy Soviet forces, seize the city and crossings along the Rivers Don and Volga, and block traffic on the river. Other units would advance quickly to Astrakhan to block the main waterway on the Volga.

The Germans concentrated an entire army group at one point—Rostov. Hence the chance to encircle still strong Soviet units beyond the Don was missed. In addition, terrain, weather, and fuel shortages worked against the group. By the beginning of August an army of two German and one Romanian corps totaling eight divisions was assigned to support the drive toward Stalingrad, which was to last just over three weeks. Army Group A was directed to concentrate its remaining motorized units for a drive toward Maikop. Hitler overestimated the results of the German summer offensive in southern Russia and became preoccupied with seizing oilfields in the Caucasus, thus neglecting the thrust toward Stalingrad.

Terrain also affects culmination. Defenders can usually use it to deplete advancing forces, like the case of the Soviet offensive in southern Russia in early 1943. Unfrozen rivers delayed the advance by canalizing Soviet attacks. Villages provided defensive positions for the Germans. The mobile units lacked vehicles to advance over inhospitable terrain. Intermittent thaws exacerbated the already tenuous supply situation by turning portions of the countryside into quagmires which bogged down transportation. Although attackers can overcome the effects of terrain by speed and intensity, operating at higher tempo has drawbacks that can degrade attacking forces.

Distance impacts on both offense and defense. The width and depth of a theater can cause dispersal of combat power, a special problem for attackers. For example, the unsuccessful Soviet offensive in southern Russia

pursued German troops uninterrupted along a 750-mile long front, which in the south attained a depth of 435 miles. Soviet spearheads became thinner and thinner and eventually came to a halt. Overextension and

weakening of Soviet combat power was the main reason the German counteroffensive succeeded.

Time is another factor and it generally favors defense. Defenders seek to delay decisions and use time to increase their relative advantage while attackers must hasten decisions because the passage of time benefits the enemy. Causes of culmination intensify over time and space. These factors interact to bring an attacking force to the point of culmination.

Still another contributor is the reduction of combat power through attrition, possibly exacerbated by fatigue and disadvantage in position, terrain, or weather. Here the culminating point is influenced by the ability to concentrate force at a critical point to gain surprise, shock, or momentum. Another factor is the inability to protect friendly forces. If superior mass is dissipated prior to attaining the objective, the principle of the offensive—the initiative—is foreclosed. Numerical superiority does not ensure success; rather it is the application of superior combat power at the decisive place and time. The Soviets violated the principle of mass repeatedly in offensives by advancing over broad fronts in multiple directions to seize ever-expanding objectives almost simultaneously.

Further, commanders might be overly optimistic or pessimistic in assessing operational or strategic situations. Their perception of enemy capabilities or intentions might be wrong. Or they

might have unrealistic expectations of subordinate commanders or forces. These and similar errors could be significant in reaching or overshooting one's culminating point.

Lack of logistical support is also a cause of culmination; for instance, poor organization of the forward movement of supplies and lack of transportation, ammunition, fuel, or food. Constant combat and overextension of supply lines exacerbate the problem. Ever-lengthening supply lines and corresponding sustainment difficulties were principal reasons for the failure by General Erwin Rommel to continue his offensive beyond El Alamein in 1942. The drive into Egypt culminated in late June because of exhaustion after almost five weeks of continued combat that began at Gazala. By early July German forces were woefully short of manpower, especially infantry. Their line of supplies was some 1,600 miles while that of the Allies from Egypt was roughly 100.

Both attackers and defenders can reach culminating points because of a lack of intelligence. For example, during the first battle of El Alamein in July 1942 Rommel lost his intelligence assets, making it more difficult to determine an accurate picture. A culmination for attackers can also occur when their forces move faster than intelligence support. Commanders and their staffs can reach wrong operational conclusions, although they are otherwise in possession of good intelligence. The Soviet High Command and front commanders completely misread German intentions and capabilities both prior to and during their unsuccessful offensive in southern Russia.

The premature arrival or overshooting of a culmination point is rarely a result of any single factor, no matter how dominant. For example, the Soviets culminated in southern Russia because of logistical difficulties, highly attrited troops and matériel, lack of reserves, poor intelligence, and unawareness of their limitations. Stalin and his generals were too sure of success. A poorly prepared and broad linear offensive was planned along a 750-mile front. No operational reserves existed or were created, forcing the Soviets to pull divisions out of line to meet new operational requirements, thus creating additional vulnerabilities. Commanders also failed to mass whatever combat strength they had, thereby limiting their offensive potential. They allowed depleted divisions to continue to fight ineffectively instead of regrouping the remaining tanks, artillery, and soldiers into fewer but stronger units. Higher headquarters constantly pressured subordinates to maintain the momentum to accomplish assigned missions, resulting in units bogging down in unsuitable tasks. The Soviets also misread operational conditions, wrongly assuming the Germans were retreating. Otherwise they

if superior mass is dissipated prior to attaining the objective, the principle of the offensive—the initiative—is foreclosed

Destroyed German tank outside St. Vith.



National Archives

might have recognized that their own culmination was rapidly approaching.

Methods for Victory

Both sides seek to obtain their objectives before reaching culmination. Attackers must delay their culmination point in time and space while defenders try to hasten it. Attackers can forestall arrival at or overshooting their point by better force protection to lower rates of attrition, maintaining the initiative and high operational tempo, and ensuring timely arrival of reinforcements or commitment of reserves. They can also properly sequence major operations, plan sound tactical and operational fires, and employ operational pauses. In addition, they can apply maneuver, unity of effort, simplicity, and security. An offensive culmination can be delayed by the proper synchronization of logistics, allowing commanders to control the tempo of their actions. This is more important on the operational than the tactical level because of larger factors of space, time, and forces and correspondingly direr

consequences if logistical sustainment proves inadequate. To reach a decision more quickly, commanders might overextend their forces on a temporary basis, but that is always risky. A prudent operational commander should weigh all the factors to measure the importance of success against the chance of failure.

The task of defense is hastening culmination for attackers before they reach their objectives. Among other things, defenders can speed culmination for attackers by inflicting high attrition with combined ground-air attacks. They can derail the attack timetable by offering unexpectedly strong resistance at selected points. They can also interdict lines of supply by striking at road or railroad junctions, depots, or bridges to neutralize vital facilities, thereby causing a ripple effect on logistic infrastructure. Defending commanders who realize that an attack has passed its culmination point can then shift to the counterattack. Attackers must then go on the defensive, but without the inherent advantages of defending.

Given the luxury of waiting, defenders may reduce the strength of attackers faster than their own capabilities while protecting their main

sources of power. But they will eventually approach a defensive culminating point. Then they will no longer benefit from waiting, and their losses yield no further relative advantage over attackers. There is no guarantee defenders will succeed unless they obtain a safe margin of relative combat power. Thus defenders should direct their efforts not only against enemy forces but against elements of their logistical sustainment. The essence of the plan by General Douglas MacArthur to land 150 miles behind the North Koreans by besieging the Pusan Perimeter was cutting off their supply lines, thus bringing on operational culmination faster than through attrition. X Corps not only cut off supply lines but forced the enemy to face threats from two directions. Synchronized with the landing, Eighth Army launched an offensive to break out of the Pusan Perimeter. The impact of the Inchon landing caused the rapid disintegration of the North Korean army.

Another option is trading space for time and preserving combat power while stretching out enemy supply lines. As lines grow they become more vulnerable, compelling an enemy to assign

more resources to defense and thus weakening its ability to advance. Another way to accelerate the point of culmination is by attacking selected modes of transport or requiring an enemy to carry supplies and reinforcements by more time-consuming and vulnerable methods. For example, during the Soviet offensive in southern Russia, the Germans focused on attacking enemy railroads, thereby forcing the Soviets to use motor and horse transport.

sequencing. Operational tempo is related to intermediate objectives. The more there are, the slower the tempo. If not properly phased, an operation may culminate too soon. Hence a culminating point could be prevented by planning an operational pause after a given intermediate objective is reached and prior to starting the next one. To maintain momentum, highly mobile second echelon units and reserve forces must be organized and maintained throughout an operation. The proper time for employing them must be anticipated during planning and reassessed in execution. Relative combat power can shift if opposing forces appear when they are not expected by an enemy. Combat power is always more effective when either used in conjunction with surprise or in attacking enemy flanks and rear. An adequate deception plan is also advisable.

Reminders for Commanders

A vital consideration for commanders during execution is sensing the culminating point in order to defeat an enemy before reaching it. For commanders who don't balance ends and means, this decision can cause a mismatch between combat and sustaining resources that might bring culmination before reaching the objective. In any event, precise knowledge of friendly and enemy combat power is needed to reach assigned objectives.

Commanders who are fixated on the current or next engagement will have trouble realizing the culmination of their combat power in a timely way. To succeed they must envision the actions necessary to gain and maintain the initiative. In that way they can anticipate strains and stresses on their forces. Operational commanders must outwit an enemy and be impervious to ambiguity on the battlefield. They should search for weaknesses, bypass enemy strengths, and contain hostile forces. If an enemy reacts unexpectedly, plans should be altered to maintain the initiative.

Intelligence is important in identifying and evaluating indicators of premature culmination. Diverse sources ranging from technical to human intelligence should be used. Among other things command, control, and communications systems should operate in concert with intelligence during the execution phase. Another great challenge is the execution of a maneuver and associated fires. Logistics must continue to work. Moreover, force protection is critical. First and second echelon units and reserves should be fully protected as should rear areas and services.

The inability of commanders to anticipate the arrival of points of culmination has often caused setbacks—even the failure of entire operations. In the first battle of El Alamein in July

commanders should analyze all pertinent factors that affect arrival at the culminating point before assigning objectives

forces by more time-consuming and vulnerable methods. For example, during the Soviet offensive in southern Russia, the Germans focused on attacking enemy railroads, thereby forcing the Soviets to use motor and horse transport.

Guidelines for Planners

When planning an operation or campaign, commanders should analyze all pertinent factors that affect arrival at the culminating point before assigning objectives. The ability to assess combat power is directly related to ability to visualize both the situation and trends in relative combat power weeks or months ahead. The higher the level of command, the broader the perspective must be.

Elements of operational design that directly influence arrival at the culminating point include objectives, sequencing, phasing, reserves, surprise, deception, and center of gravity. Culmination may be avoided by calculating the number and the scale of intermediate objectives and



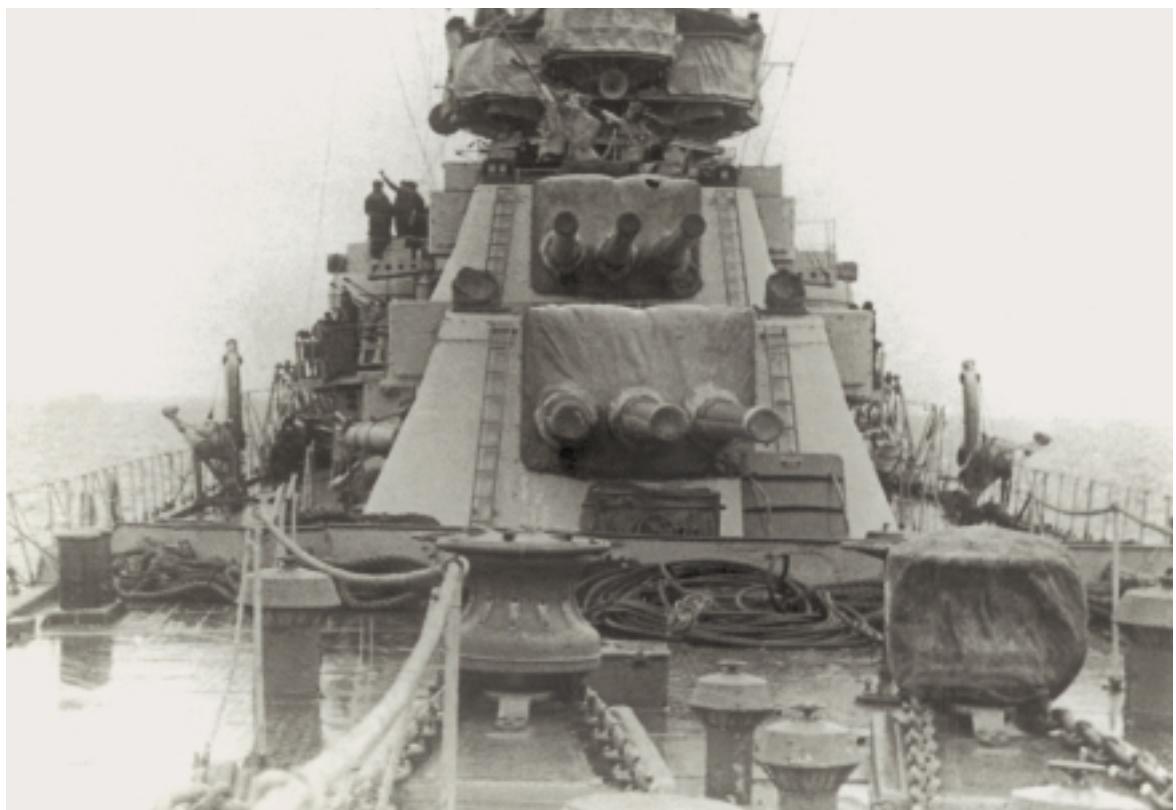
Naval Historical Center

Unloading men and equipment at Inchon.

1942, the Germans reached their operational culminating point, thus creating preconditions for a British counteroffensive and eventual victory. Yet neither side foresaw or acknowledged the culminating point although indicators were present. Initially Rommel apparently sensed that the British had gained the tactical initiative. He had only 26 operational tanks, stretched supply lines, and exhausted troops and faced increasingly stiff British resistance. Late on July 3 he admitted defeat and gave the order to dig in. For the next few days Afrika Korps repulsed repeated British attacks but with only a slight margin. Rommel still did not acknowledge passing his operational culmination. After several days of rest, he attacked and was repulsed again. The men and matériel he expended were critically needed later in the second battle of El Alamein.

Defenders should be alert to an error by attackers in continuing the offensive after reaching culmination, then exploit the situation or miss the opportunity for victory. In the Franco-Prussian War the Germans reached this point twice without the French noticing. The first instance occurred in September 1870 when the German offensive stalled. By then they had almost half of their army involved in the siege of Paris and the fortress of Metz. About 150,000 German troops surrounded the French capital, but the invasion was delayed because of a lack of siege equipment. At the same time, the Germans faced a threat from fresh armies raised in southern France to relieve the siege of Paris. Miraculously the Germans did not suffer setbacks because the French in

**Soviet heavy cruiser
Molotov in Black Sea.**



Naval Historical Center

Metz surrendered by late October, and the Germans resumed the offensive. By mid-December the Germans reached a second culminating point, a rare occurrence in history. The great successes achieved by German armies on the Somme and Loire were not exploited because of lack of forces. The Germans were unable to seize Le Havre, Lille, and Bourges, and instead captured unimportant objectives such as Chartres, Orleans, and Beauvais. Yet the French were unable to take advantage of the situation and the war ended with the fall of Paris.

The concept of the culminating point remains relevant. While its theoretical underpinnings were essentially postulated by Clausewitz, its content has undergone change. The operational level has emerged. The factors affecting culmination are more diverse and difficult to quantify. Thus applying the concept is harder, especially in low intensity conflict when the linkage between strategic and tactical levels is more blurred than in operational warfare. Also, factors that affect culmination are largely unquantifiable. Although theory is critical in sensing the arrival of a culminating point, it doesn't guarantee success. Historical examples facilitate a proper understanding of theory, but they can't provide a path to the future.

Applying this concept requires skill on the part of commanders and their staffs, especially on the operational and strategic levels, because the result of premature culmination or failure to take advantage of enemy culmination are more severe and durable than on the tactical level. Operational commanders must identify factors that cause friendly and enemy forces to reach culmination, then plan action to prevent or hasten the occurrence. Intangible elements of combat power, specifically leadership, morale, discipline, doctrine, and training, remain critical. So operational commanders, who must pay attention to tangible elements of combat power that affect or cause culmination, also must focus on unquantifiable elements that significantly or even decisively affect it.

JFQ



USS Theodore Roosevelt (Johnny Grass)

Morality and Modern Air War

By JEFFREY L. GINGRAS and TOMISLAV Z. RUBY

The Armed Forces should promote morality in warfare, consistent with our cultural norms and national strategy of advancing democracy and the rule of law. Air operations can be conducted on the strategic and operational levels under just war principles while minimizing casualties on both sides and bringing a swift end to conflicts. This may require the military to institutionalize certain changes, develop new weaponry, and reconsider some operational procedures.

There are two fundamental areas of just war theory: *jus ad bellum* (justification for going to war) and *jus in bello* (just conduct of war). In executing air campaigns, dilemmas revolve around the latter and focus on questions of military necessity and proportionality.

Targets must not be attacked unless they are necessary to the outcome of a war. According to one writer, the necessity for war "can only justify the killing of people we already have reason to think are liable to be killed."¹ This precept requires that noncombatant casualties be avoided. Non-combatants are personnel who do not directly serve in or support the military, such as those working in industry, supply, or administration. Bombardment that adversely affects noncombatants disproportionately to the necessity of destroying the intended targets is deemed immoral. Such effects range from targeting and striking noncombatants directly to inflicting short- or long-term detrimental effects on them.

Simply stated, proportionality means that commanders must use appropriate weapons and tactics for the task at hand. Weapons that produce more damage than is required are prohibited. Proportionality is not only about excessive harm but weighing "injury to the permanent interests of mankind against the contribution that mischief makes to the end of victory."²

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Recent Perspective

Operation Allied Force, the NATO bombing campaign in Serbia, presented two especially compelling moral questions. The first was translating political objectives into military strategies for effects-based targets within moral guidelines. The second was the need to be honest and consistent in selecting military objectives to carry out the strategy.

On March 24, 1999, President William Clinton stated three objectives:

- to demonstrate the seriousness of NATO opposition to aggression and support for peace
- to deter the Serbs from attacking helpless Kosovar Albanians and make them pay if they continued
- to damage Serbia's capacity to wage war against Kosovo by diminishing its military capabilities.

The joint force air component commander (JFACC), Lieutenant General Michael Short, USAF, was tasked to transform the objectives into targeting guidance. One of his first challenges was a glut of assets. According to one report, "By late April, NATO had more combat planes than targets to hit. Both [General Wesley Clark, USA, Supreme Allied Commander Europe] and the airmen putting together each day's tasking orders were frustrated."³ NATO began the conflict over Kosovo with a master file of 169 targets. It ended with 976 filling six volumes. Initially, with so few targets and more planes flowing

threatened the lives of airmen and noncombatants on the ground.

In addition, further analysis suggests that joint planners should never have sent many of the targets forward because of a lack of military significance to the stated objectives and the likelihood of disproportionate collateral damage. Moreover, while persistence is a tenet of aerospace power, it does not require that targets be reattacked after the desired effects are achieved.

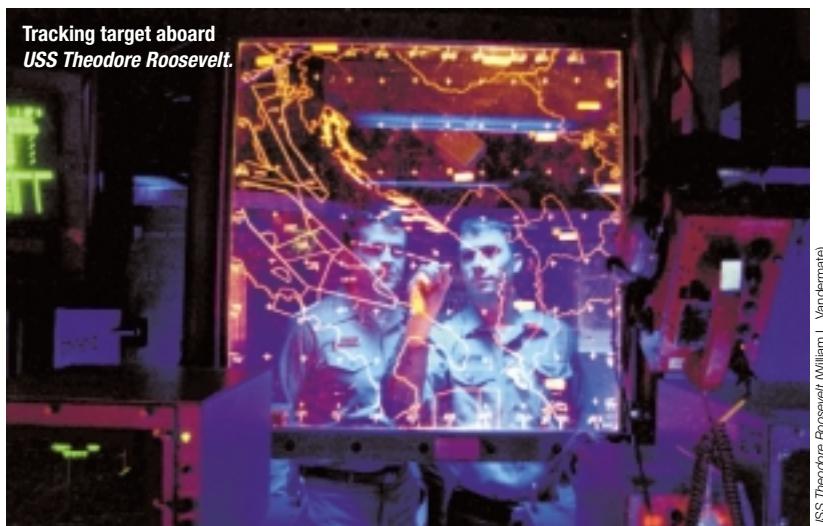
Attacking numerous targets may have made a powerful statement of coalition resolve but at a cost to Allied credibility. Through television, newspaper photos, and the Internet the world saw numerous incidents of collateral damage and noncombatant death in Serbia. Was it worth the risk to reattack targets near concentrations of noncombatants? Evidence emerged from interviews with witnesses that raised questions. For instance, an apartment block was hit on May 31 reportedly killing 11 people and injuring 20. The targets were a publishing house and regional television and radio offices near a hospital and bus station. At a press briefing the next day, NATO spokesman Jamie Shea said one bomb went 60 meters long. Although 19 of the 20 bombs hit their targets, did those targets justify dropping 20 bombs so close to an apartment block, bus station, and hospital? In another case, NATO repeatedly bombed a barracks in Leskovac, which was empty six months before the hostilities started. The attacks left few windows on nearby homes and disrupted medical care at a hospital for the duration of the conflict. Repeated strikes against certain targets whose necessity did not outweigh collateral damage may have been legal but not morally justifiable.

Much of the difficulty in determining appropriate targets came during planning. According to remarks by one senior officer at the Air Force Doctrine Symposium in March 1999, the joint air operations planning process didn't take the steps to ensure noncombatant protection. Rather, it skipped from determining objectives directly to picking targets without matching desired effects with weapons or platforms. The NATO chief of targets agreed, stating that targets were added so quickly in order to build a large list that there was not time to do a proper workup on them. This process wasted lives and resources without returning operational or strategic advantages.

In fact, regular Serbian forces, moving into Kosovo and conducting the worst atrocities after the first night of Allied Force, were garrisoned outside Kosovo and parked in cantonments as NATO flew the initial sorties into Serbia. Had

repeated strikes against certain targets may have been legal but not morally justifiable

Tracking target aboard *USS Theodore Roosevelt*.



USS Theodore Roosevelt (William L. Vandemate)

into the theater, the list of approved targets grew. Even then, approved targets were attacked after being functionally or totally destroyed. It appeared the Allied objective was a particular sortie rate rather than a desired endstate. From a moral standpoint, this wasted resources and needlessly

110th Fighter Wing (Chani Devers)



USS Theodore Roosevelt (Jason Scarborough)

A-10 pilot checking map before mission over Kosovo.

F-14 preparing for strike, Allied Force.

NATO flown against those forces the first night rather than targets in Belgrade, the Allies might have achieved all three stated objectives in far less time while minimizing (likely eliminating) nonproportional collateral damage and leaving infrastructure intact. However, NATO initially ignored forces in favor of infrastructure. But destroying bridges in Novi Sad, hundreds of miles north of Kosovo, had no impact on forces in the province. NATO claimed that the result was that residents were inconvenienced by losing easy access to Belgrade. Again, morality requires that targets be relevant. Inconveniencing was not a stated objective. The linkage between targeting the bridges and the strategic goals of the campaign were highly debatable.

Beyond hurting people, destroying bridges on the Danube and along the main north-south line of communication in the region adversely affected commerce and trade in Central and Eastern Europe. Thessalonica in Greece, once the major port for goods entering Central Europe, has been seriously impacted since the destroyed bridges made roads through Yugoslavia impassable.

Political Disconnect

As target selection became an issue so did approving them. As noncombatant casualties rose, civilian leaders asked what was being hit and why. When they were not satisfied that target necessity was being proportionately balanced against noncombatant casualties, they exercised

their control over the military. French Prime Minister Jaques Chirac, British Prime Minister Tony Blair, and President Clinton all determined to "review targets that might cause high casualties or affect a large number of civilians."⁴

Had General Short structured the air effort, according to one BBC report, he would have arranged for the Serbian leadership to wake up "after the first night . . . to a city that was smoking. No power to the refrigerator and . . . no way to get to work. He believes that in very short order, Milosevic's staunchest supporters would have been demanding that he justify the benefits of ethnic cleansing, given the cost."⁵ Such a strategy would not have been moral in the context of this war, which is why civilian leaders from the United States, United Kingdom, and France retained target approval authority.

The real question, however, was why more appropriate targeting guidance and supervision were not implemented at the outset? That leads to a second and broader issue: selecting objectives in war that can be achieved justly, and conveying them down the chain of command to planners as well as to the public at home. Both military and civilian leaders must be consistent in articulating and transmitting objectives. That should drive planners to justly accomplish stated goals.

This was not the case in Allied Force. The objectives stated by the President did not match those stipulated by NATO Secretary General Javier Solana on April 1, 1999:

- stop the killing in Kosovo
- end the refugee crisis; make it possible for exiles to return
- create conditions for political solutions based on the Rambouillet Accord.

The contrast in wording from an address by Clinton nine days earlier was enough to cause a serious difference of opinion regarding how to conduct the war. American planners, ordered to damage the capacity of Serbia to wage war, subjected a range of targets to attack. Other members of the Alliance did not recognize that U.S. objective as a NATO aim and would not agree to certain targets. This dispute over guidance inserted friction into the process of coordinating multinational planning staffs and into the operations of the coalition as a whole.

Another issue was a lack of forthrightness with both the military and the public. The media repeatedly quoted NATO leaders who remarked

that harming civilians was never an objective. For example, on March 25, 1999, General Clark told reporters that the air campaign was "not an attack against the Serb people" and NATO

"was taking all possible measures to minimize... damage to innocent civilians or nearby property that's not associated with the target." Yet although the Allied struggle was with Milosevic, not his people, Serb civilians viewed the war in a very different light. Bombs dropping from NATO planes were hostile regardless of their political purpose. In fact, as the war continued, NATO put greater pressure directly on the Serb people. Press coverage reveals that later in the conflict the Allied leaders accepted the notion that, while avoiding civilian deaths, they needed to inflict a degree of pain on the populace. "The West hopes that Serbs, seeing hospitals and businesses without water and electricity, will turn their wrath on [Milosevic]."⁶ This shift in policy failed to match NATO rhetoric and thus undercut the credibility of military operations.

The changes in Alliance operations not only lacked transparency but were of questionable military value and hence perhaps not morally defensible. Karl Mueller of the School of Advanced Airpower Studies says "attacks on electrical power

mainly serve to damage the economy. It is not clear that this goal is worth pursuing because damage to electrical power has very serious collateral damage effects due to its impact on medical care and other essential services for civilians."⁷

Future Operations

Overall the NATO effort was troubled. Whether anything was learned from shortfalls in the campaign is unclear. Official lessons learned from Allied Force failed to mention how to reduce noncombatant casualties.

Future operations must pay greater attention to minimizing this peril. Today societies are largely interconnected and interdependent both within and among countries. Attacking one part of a society will impact elements not related to the war effort. This presents a moral dilemma America cannot shy away from.

Destroyed factories no longer produce goods for an enemy state, but neither do they make goods for export. Economies that are closely tied together, such as Yugoslavia and Greece (which is a NATO member), have serious impact on neighbors when shut down in wartime. The Greeks, for example, have noted the effect of the conflict over Kosovo on their economy and the need for the European Union to rebuild the infrastructure of Yugoslavia to return commerce and industry to pre-war levels. As this example illustrates, the long-term consequences of targeting must be given greater weight in an increasingly interdependent world.

To apply morality to aerial bombardment, we must employ available technology to wage effective campaigns while minimizing the impact of weapons on noncombatants. For targets close to noncombatants, we must use nonlethal means which only affect military capabilities or develop lethal methods to destroy targets while reducing collateral damage. Several concepts, such as small smart bombs (SSBs), have either been successfully tested or are under development.

The Air Force Research Laboratory Armaments Directorate is developing precise weaponry with very small warheads. SSBs could deliver a hardened weapon with extreme precision using diminutive warheads that increase lethality with reduced explosives. No longer must weaponeers select multiple large blast/fragmentary weapons in the 500 to 2,000-pound range for point targets.

In Allied Force, the avowed goal of dropping major bridges in Yugoslavia was to destroy the fiber optic cables running over them. SSB technology might have hit the cable pipe but left the bridge standing. It might also have had the accuracy to strike a media facility across the street from a hospital while leaving patients uninjured.

the long-term consequences of targeting must be given greater weight in an increasingly interdependent world



F-16 with KC-135
over Kosovo.

1st Combat Camera Squadron (Jeffrey Allen)

The Air Force also has small unpiloted combat aerial vehicles under development that have extended range and precision locating capability. Such weapons can deliver a small warhead onto a hardened target over extremely long distances while keeping friendly aircrews out of harm's way and greatly reducing noncombatant casualties.

Achieving military objectives with both minimal risks to friendly forces and zero collateral damage conforms to several principles of war, especially economy of force and security. While achieving objectives initiated by political leaders and refined by operational commanders is the military mission, it can be argued that, given available technology, such objectives can be reached with fewer risks to friendly forces and noncombatants. Requirements must be written to achieve a certain effect, but not necessarily the total destruction of a target set along with numerous civilians.

One authority noted that "airpower is targeting, targeting is intelligence, and intelligence is analyzing the effects of air operations."⁸ Many planners of joint aerospace operations instinctively increase the number of bombs to be dropped on a target because they think the mission requires it. They don't trust bomb damage assessments and find it easier to ensure that a target is completely destroyed than to look for the effects. This is an

operational practice that must be changed. Perhaps with new technology planners will become more discriminating in the use of fires.

To maintain the Nation's role as a global leader, the Armed Forces must conduct wars with a high degree of morality. We have allowed ourselves to accept a certain level of civilian casualties as inevitable. But many may not be necessary. There is no obligation to threaten the majority of a population with death, injury, or loss of livelihood when their country or a neighboring country is engaged in a conflict with the United States.

While not all noncombatant casualties can be avoided, it is immoral to produce casualties disproportionate to the necessity of attacking a given target. To wage moral operations, we must choose objectives that rapidly lead to the desired end-state. If it is likely that noncombatants will be affected when striking targets, the proportionality decision should be made at no lower than the JFACC level to create appropriate linkage between operational requirements and strategic objectives. Moreover, technologies should be fielded that can achieve desired effects with less collateral damage.

American decisionmakers must recognize that military actions have consequences that reach far beyond the battlefield and affect people outside the borders of an enemy state. Certain actions are simply wrong and must be avoided. **JFQ**

NOTES

¹ Michael Walzer, *Just and Unjust Wars* (New York: Basic Books, 1992), p. 144.

² Ibid., p. 128.

³ Dana Priest, "Target Selection Was Long Process," *The Washington Post*, September 20, 1999, A-11.

⁴ Priest, "Bombing by Committee," *The Washington Post*, September 20, 1999, A-1.

⁵ John A. Tirpak, "Washington Watch: Short's View of the Air Campaign," *Air Force*, vol. 82, no. 9 (September 1999), p. 43.

⁶ Rowan Scarborough, "Bombing Utilities Could Backfire, Experts Warn," *The Washington Times*, May 25, 1999, A-14.

⁷ Ibid.

⁸ Phillip Meilinger, *10 Propositions Regarding Airpower* (Maxwell Air Force Base, Ala.: Air Force History and Museums Program, 1995), p. 20.



U.S. Navy (Terry Mitchell)

Mission Creep or Mission Misunderstood?

By ADAM B. SIEGEL

In the decade of the 1990s the term *mission creep* became a buzzword. Changing views of roles and missions brought greater prominence to the underlying phenomena the concept described. Even though its precise meaning is uncertain, mission creep influences military operations on the policy, operational, and tactical levels. The time has come to examine why this concept arouses such passions.

In an operations order, the Supreme Allied Commander Europe stated that Implementation Force (IFOR) should "avoid mission creep" during Operation Joint Endeavor in Bosnia and Herzegovina (December 20, 1995–December 20, 1996). In his operational plan, the commander of both NATO Southern Region and IFOR indicated that "mission creep is to be resisted." The term arose in other contexts throughout Joint Endeavor, with commanders citing the threat of mission creep as

a basis for avoiding actions. The validity of some actions was defended despite the threat of mission creep. The term even found its way down to enlisted personnel, who explained certain actions as necessary to avert mission creep. All this took place without defining the term. The lack of any common definition produced a trump card that stifled debate and led to rejecting tasks that may have been justifiable aspects of the military mission. Richard Holbrooke, chief negotiator of the Dayton Accords, asserted:

The military did not like civilian interference "inside" their own affairs. They preferred to be given a limited and clearly defined mission from their civilian colleagues and then decide on their own how to carry it out. In recent years, the military had adopted a politically potent term for assignments they felt were too broad: "mission creep." This was a powerful pejorative, conjuring up images of quagmire. But it was never clearly defined, only invoked, and always in a negative sense, used only to kill someone else's proposal.¹

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A key question was where proper civilian control over the military ended and mission creep began. It was debated in staff meetings, around negotiating tables, and by the media (which often pushed for greater NATO involve-

ment in nonmilitary aspects of the war-to-peace transition).

Various mission creep concepts arose in discussions on operations in Bosnia. Usually they reflected divergent views on employing military force. These concepts of mission creep also

revealed institutional and personal anxieties on the part of civilians and military parties alike.

Command Concerns

In no small part concern over mission creep derives from fears that military forces might be either misused or events could put an operation into greater danger. Examples include:

■ *Losing focus on what matters.* Some fear that diverging from military missions will lead commanders to focus more on secondary issues, taking attention and assets away from vital areas. This assumes that initial planning and mission statements capture the most important needs and that anything that happens later distorts planning. This reflects the view of those who do not want the military engaged in civilian tasks.

■ *Losing focus on security risks.* Involvement in the civil sector can lead forces to lose perspective and misdirect their traditional focus on maintaining a secure environment. This view assumes that increased military involvement in the civil sector puts forces at greater risk.

■ *Loss of certainty.* Many individuals and organizations prefer clearly delineated tasks.² Nontraditional duties usually create uncertainty.

■ *Entanglement.* Engaging in additional tasks makes it more difficult to withdraw when missions are completed than if forces adhere to limited mandates.

■ *Added costs.* The assumption of civil tasks can cost money and lives. Some fear that forces may bear such burdens without adequate compensation. This concern can be driven in part by outside players who view the military as rich by comparison to their own organizations and question why the military cannot perform more nontraditional roles.

■ *Misuse of military capabilities.* This fear arises from nongovernmental organizations which believe the military should not be engaged in certain activities (and that it is an expensive instrument for some nontraditional roles) and from officers who decry the impact of humanitarian assistance on combat readiness.

■ *Professional distaste.* Some members of the military prefer not to be involved in what they perceive to be do-gooder humanitarian or law enforcement tasks such as drug interdiction which risks corruption.

Each of these anxieties helped drive the discussion over operations in Bosnia. Colored by differing interpretations, they add to the challenge of understanding various perspectives on mission creep.

concepts of mission creep revealed anxieties on the part of civilians and military parties alike

Alternative Framework

Tensions over mission creep derive partly from a notion that distinct civilian and military (or political, economic, cultural, humanitarian, or developmental) missions exist in places like Bosnia. Though that may be true, all missions must support an overall objective. Thus rather than separate missions, a more accurate conception might be the civil-military mission, with diplomatic, military, and other roles in support of such objectives. Then much of the controversy would be centered on realigning mission-essential tasks rather than engaging in unsuitable activities.

Policymaking would be enhanced by a broader definition of mission creep, one that divides it into categories. Such an effort would also provide a framework for appreciating mission change. Four categories of mission change have emerged, each with its own rationale.

Task accretion is the accumulation of added tasks viewed as necessary to achieve initial mission objectives. Such changes generally occur on the ground as the man on the spot believes necessary. Task accretion happens not because of changes in desired outcomes but rather changing perceptions of what is required to achieve objectives.

During Operation Provide Comfort in 1991, Marine Corps and other forces restored basic utilities in northern Iraq to encourage Kurdish refugees to return to the cities. Such actions were not included in initial tasking nor envisioned during planning for movement into Iraq but were deemed necessary for achieving mission objectives.

Mission shift occurs when forces adopt tasks not initially included that, in turn, lead to mission expansion. There is a disconnect between on-the-scene decisions to involve forces in additional tasks and political decisionmaking about objectives.

In 1993, a French army general flew to Srebrenica in Bosnia-Herzegovina and denounced Serbian attacks on the city as part of a drive to engage the U.N. Protection Force in its defense of refugees and other civilians. His actions and the reactions of Bosnian Muslims created pressure for the declaration of safe havens. That basically shifted the character of the U.N. mandate.

Mission transition comes about when a mission undergoes an unclear or unstated shift of objectives. This occurs at higher headquarters and in political sectors in an environment of gradual and perhaps unclear or unrecognized modification. The changes may neither be explicitly stated nor lead to reevaluation of forces involved and assigned tasks.

Escorting food convoy
to Biado, Somalia.



U.S. Navy (R.J. Orlitz)

Although it is harder to provide a clear instance of mission transition, one might be support by the United States to U.N. operations in Somalia in 1993. The available record indicates that the administration was moving toward a new policy while the military continued operations in pursuit of objectives established following attacks on U.N. and U.S. forces. If political leaders made the transition to a new policy and changed mission objectives, as seems possible, they did not clearly communicate this shift in orders to the military.

Mission leap occurs when missions are radically changed and thus alter military tasks. These are explicit choices, whether or not political or military leaders recognize their implications.

When several NATO members began relief efforts for Kurdish refugees in Turkey in 1991, it was a short-lived emergency program. Within days it became a coalition mission to help Kurds return home (including safe havens in northern Iraq). Some Allied nations maintained assistance to the Kurds in Iraq for more than five years, and no-flight enforcement continued until 1998.

Missions change like the tasks required to achieve them. Denying this reality only compounds the problem. These four categories explain why military involvement is transformed during an operation. They provide a framework for understanding when such changes might lead down a dangerous path.

It is apparent that task accretion, mission shift, mission transition, and mission leap are part of conducting peace operations. In fact many efforts—such as IFOR—represent them all, at least as possibilities. Rather than just decrying mission creep, this approach offers a focus on real problems which are generally lumped under the term.

Task accretion and mission shift refer to bottom-up situations where on-the-ground factors drive change. Mission transition and mission leap are top-down; decisions taken away from the scene lead to some form of mission change. Task accretion and mission leap are inevitable parts of an operation, illustrating conscious decisions reached at higher headquarters or on the scene to change or radically modify mission constraints. They reflect the reality that not everything can be foreseen before conducting an operation—that situations are not always static and thus responses to them may not be either.

Serious problems arise with mission shift or transition. In both cases there are disconnects between political objectives and military operations.

task accretion and mission leap reflect the reality that not everything can be foreseen before conducting an operation



Manning checkpoint,
Joint Endeavor.

56th Signal Company (Nicholas J. Blair)

They lack clarity regarding desired endstates, which constitutes an aggravating factor. Policy guidance and interaction between engaged forces and higher headquarters are needed to avoid missteps in such shifts and transitions.

Misguided Typology

In developing terminology to explain mission change perhaps the focus should be turned to defining long-term objectives for using force and assuring that the resulting tasks accord with them. In sum, a number of factors contribute to mission creep. The fact is that operations are not static. Missions change because tasks or endstates change. In essence tasks change because the situations are different than expected or shift in unexpected ways.

This view of mission change suggests that policymakers and planners must explicitly state their assumptions about missions and that each should have an information requirement. Thus no military plans should be considered complete unless assumptions are directly associated with some means to verify their validity.

When new information calls any assumption into question it should prompt evaluations of missions, forces, and tasks. If tasks are at issue, the forces deserve examination. If endstates are the concern, operations must be fully reviewed, including the forces.

To understand issues related to mission creep, a key is ensuring the consistency of military activities on the ground with political objectives. This requires a commitment to clearly identify mission goals. Both political leaders and military commanders must engage in constant dialogue to ensure congruity. This becomes all the more critical when the nature of an operation changes.

The following three situations can create the greatest risk:

- changes in policy that do not lead to reviews of force structure or tasks
- shifting environments and actions on the ground that do not lead to reviews of policy
- decisions about force structure, tasks, missions, or policy that are not made in relation to the true purpose of a military operation and are divorced from the realities on the ground.

This sort of approach—linking objectives, guidance, planning, and tasks—typically occurs most significantly at the onset of operations. Such reviews do not always take place as operations are extended or marginal changes are made in guidance, which increases the possibility that political and operational realities become separated.

In identifying the dangers of evolving tasks and missions, both civilian and military leaders must evaluate those missions and tasks on all levels of command. They should not lose sight of the relationship between political objectives and military operations. Decisionmakers must grasp why privates on the ground do or do not undertake a task. Without that common view, a military operation will risk becoming divorced from political aims. This is the true peril—that an operation might inadvertently head toward failure due to a lack of understanding of the relationship between actions on the ground and long-term objectives.

JFQ

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¹ Richard Holbrooke, *To End a War* (New York: Random House, 1998), p. 216.

² One definition of mission creep is derived from situations in which the military moves from well-defined or achievable missions to ill-defined or impossible ones. This implies setting up forces for failure since missions become unachievable. Accordingly, some may fear that mission creep results from efforts to blame the military for the failures of others. Such a definition also leads to loss of certainty.

Cuba Libre! Army-Navy Cooperation in 1898



U.S. Army Center of Military History

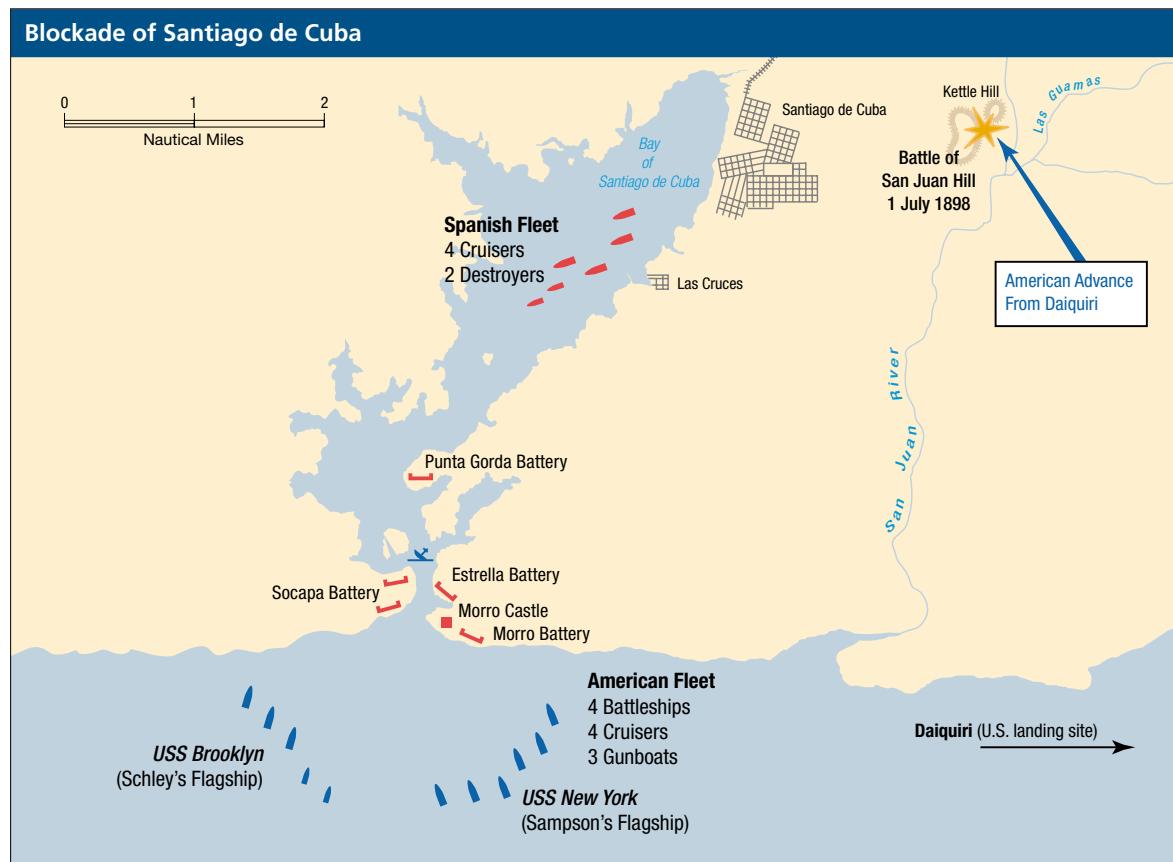
Bloody Ford,
July 1, 1898 by
Charles Johnson Post

By JONAS L. GOLDSTEIN

On April 11, 1898, President William McKinley asked Congress for authority to intervene in Cuba to end the conflict between the Spanish colonial government and local insurgents who had launched a revolt in 1895. A declaration of war was issued on April 25. Initial combat occurred half a world away when naval forces under Commodore

George Dewey defeated the Spanish at Manila Bay. Dewey, subsequently promoted to admiral, then assisted land forces under General Wesley Merritt in capturing Manila. This victory crippled efforts by Spain to bolster forces in the Caribbean or threaten America on a second front. Nevertheless, overestimating Spanish seapower, municipalities along the eastern seaboard of the United States called for defense against marauding Spanish ships, while Washington rushed to blockade Cuba. Against a backdrop of unprecedented global engagement, the services drafted joint plans for projecting U.S. power abroad.

Lieutenant Commander Jonas L. Goldstein, USN (Ret.), served with the Veterans Administration and is a prolific journalist and poet.



Service Responses

At the outset of the war, the Navy was better prepared than the Army in both organization and weaponry. The fleet had four first-class battleships: *USS Indiana*, *USS Massachusetts*, *USS Oregon*, and *USS Iowa*, as well as a second-class battleship, *USS Texas*. Among other major surface combatants were armored cruisers, including *USS New York* and *USS Brooklyn*, which were fine vessels for their day. The Navy also had six double-turreted monitors and activated 13 outmoded monitors of Civil War vintage. Finally, there were 18 smaller vessels useful against ships of their own class or in blockades, helpful since a strategic goal was blocking Cuban ports under Spanish control.

In addition, when war broke out the government transferred 13 revenue cutters along with their officers and crews to the Navy. These were not only important for the blockade but in transporting troops to Cuba. Congress also appropriated \$50,000,000 for national defense. Because the War Department had not yet finalized its plans, the bulk of the money went to the Navy, which bought civilian vessels—including 123 merchant ships and yachts—and outfitted them for war.

The Navy response was not surprising. The department had been relatively well organized since the Civil War. The Secretary of the Navy administered the service with support from an able Assistant Secretary, Theodore Roosevelt. Although there was no chief of staff, civilian officials worked with bureau chiefs, who were rotated so that naval leadership remained responsive.

The Navy had also given thought to fighting future wars. Prior to the conflict, its strategic thinking was concentrated at the Naval War College, where alternatives were considered regarding a possible war with Spain. Creative thinking in the schoolhouse was matched by energetic training in the fleet. At sea and ashore, naval officers invested in readiness. As Roosevelt stated:

Except actually shooting at a foe, most of the men on board ship went through in time of peace practically all that they would have to go through in time of war. The heads of bureaus in the Navy Department were for the most part men who had seen sea service and expected to return to sea.¹

Secretary of the Navy John Long created the Naval War Board in March 1898. Its original members were Roosevelt; Captain Arent Crowninshield, Chief of the Bureau of Navigation; Rear Admiral

Montgomery Sicard, recently detached from Commander in Chief, North Atlantic Squadron; and Captain Albert Barker. Some of the members assumed other duties once war was declared. Its permanent members included Sicard (as chairman), Crowninshield, and Captain Alfred Thayer Mahan. The board proved valuable during the conflict both to the Secretary and the President. As Long said:

**at the outset of the war,
the Army numbered roughly
28,000, with twenty-five
infantry regiments**

It was eminently fitted to coordinate the work of the department and the fleet, and to keep a general surveillance over the larger strategic and technical questions which could not be dealt with by the commanders in chief of the several squadrons. . . . To my mind the board possessed high intelligence and excellent judgment, and its service was invaluable in connection with the successful conduct of the war.²

Although the Navy was fairly well prepared, the Army was not. As Roosevelt stated:

The War Department was in far worse shape than the Navy Department. . . . [After the Civil War] the only way in which the Secretary of War could gain credit for himself or the administration was by economy . . . through [reduction in the size of the Army].

The bureau chiefs were for the most part elderly incompetents.³

At the outset of the war, the Army numbered roughly 28,000, with twenty-five infantry, ten cavalry, and five artillery regiments. These units were not prepared for a war with Spain since the Army assumed it would play a subordinate role to the Navy and that the fundamental mission of land forces was defending the Nation's borders. This view explains much of the indifference in the War Department until mid-April 1898.

As Secretary of War Russell Alger wrote:

The War Department had, on April 23, accomplished some little extra work on the coast defenses; it had ready for use enough 30-caliber rifles to arm the 33,000 men added to the regular Army, and enough 45-caliber Springfields for the volunteers; but that was all.⁴

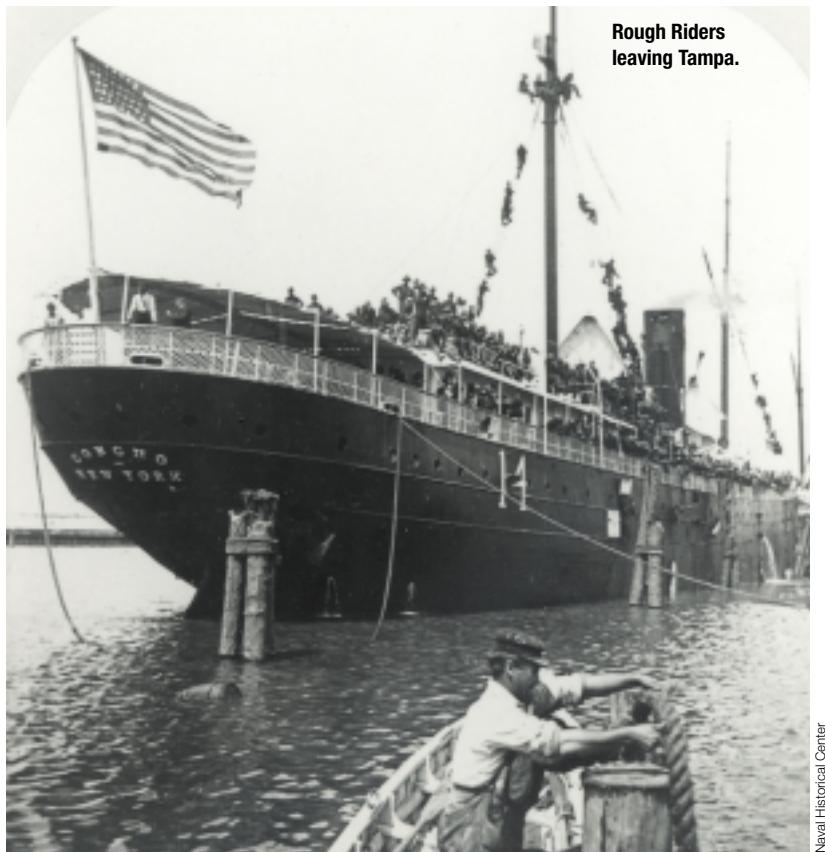
After much discussion with Congress, the administration decided to create a volunteer army to serve beside the regulars. An initial call for volunteers was confined to members of the National Guard, with quotas for each state according to population. It was also decided to form national organizations of volunteers—a concept that produced the famous Rough Riders. Congress passed a bill to that effect on April 22. The next day, the President issued the call for 125,000 volunteers. On April 26 Congress authorized a regular army of 64,719. Thus the stage was set for launching a major land campaign against the Spanish.

Strategic planning by the Army before the war was minimal, although some thinking went into an invasion of Cuba. Once war came vigorous action was stifled by the indifference shown by the President toward the War Department and weak Army leadership. Moreover, the assumed primacy of naval operations—by gaining control of waters around Cuba before an invasion—made land operations of secondary concern.

War by Consensus

An early example of joint planning and execution was manifest in Washington by a council of war convened at the White House on May 2. Because the President lacked faith in his Secretary of War and his senior military assistant, General Nelson Miles, he increasingly played a major role in formulating joint strategy. In this instance, he joined Secretary of War Alger along with Miles, Long, and Sicard. Landing sites and a naval convoy of the invasion force were dominant issues, with little discussion of the ground war to follow.

After war was declared, the Navy instituted a blockade of Cuba. The next step was determined to be the destruction of the Spanish fleet anchored in the Bay of Santiago de Cuba, but it was soon realized that success would depend on an



Naval Historical Center

Marines skirmishing,
Guantanamo.



Naval Historical Center

expedition ashore. This introduced substantial problems. To carry out the invasion, the Army had to procure sufficient transports, made difficult by the Navy commandeering vessels for the blockade. The Army finally obtained ships by securing transports with civilian crews in charge.

The Army planned the invasion throughout May. There was a consensus that control of the sea around Cuba was vital to an invasion. However, there were differences regarding the roles of the two services.

The Navy believed the landings would support the destruction of the enemy fleet while the Army envisioned the objective as a victorious land campaign. At first

the Army planned for debarkation near Havana, followed by an all-out drive on the capital. However, General Miles determined that Spanish strength in the area was too great and that the strike should concentrate on the naval base at Santiago de Cuba.

On May 31 General William Shafter—who had an expeditionary force of some 17,000 men in Tampa—was ordered by the War Department

to proceed under naval escort to Santiago. When he received the order, he could not obey. His base was chaotic with guns in one place, mounts in another, and ammunition somewhere else. Moreover, there was confusion between civilian crew members on Army transports and base support staff. Problems abounded, including an inability to unload railroad cars at the right piers. After a delay of over a week the force was ready to proceed on June 7 but was further frustrated when the Navy believed that Spanish ships had been spotted, stalling sailing until June 14.

No Misunderstanding

The main invasion force was V Corps: two divisions and an independent infantry brigade, a dismounted cavalry division, four field artillery batteries, and a handful of auxiliary troops. This force sailed into the Bahama Channel aboard 32 densely packed coastal steamers. A convoy of naval vessels joined the flotilla off Key West and began the slow voyage toward Cuba. Largely because of the inexperience of civilian crews on troop ships, the Navy had to round up and herd the makeshift flotilla. As Richard Harding Davis,

**because of the inexperience
of civilian crews on troop
ships, the Navy had to herd
the makeshift flotilla**

a journalist who accompanied the convoy, recalled, "We traveled at the rate of seven miles an hour, with long pauses for thought and consultation. Sometimes we moved at the rate of four miles an hour, and frequently we did not move at all.... We could not keep in line and we lost ourselves and each other, and the gunboats and torpedo boats were kept busy."⁵ Fortunately, as Long added, "Not the slightest attempt was made by the Spanish gunboats lurking in the harbors of Cuba to prevent the American transports with the Army on board from safely reaching their destination."⁶

Deploying and convoying the invasion force was the most notable example of Army-Navy cooperation during the war. The teamwork was outlined in a dispatch to Shafter:

With the approval of the Secretary of War, you are directed to take command on transports, proceed under convoy of the Navy to the vicinity of Santiago de Cuba, land your force... under the protection of the Navy... and cover the Navy as it sends its men in small boats to remove torpedoes, or, with the aid of the Navy, capture or destroy the Spanish fleet now reported to be in Santiago harbor.⁷

As troops sailed to Cuba—indeed throughout the war—the President was deeply involved. Leadership on this level assured completion of joint strategic planning. As Commander in Chief, McKinley alone had the authority to ensure united action by the Armed Forces. Although the Navy Department did not require close scrutiny in executing its approved strategy, the War Department lacked efficient leadership, making intervention by the President most helpful. His personal secretary noted that the "President seemed to grow more masterful day by day and exhibited infinite tact and gentleness and graciousness in dealing with men."⁸

McKinley fostered the teamwork between the services in Washington, with a war room in the White House connected by telegraph. He also brought military leaders together and assured their efforts were harmonious. With Presidential support, field and fleet commanders ensured interservice cooperation. On June 29, a dispatch from the War Department to Shafter stated, "The President directs that there must be no misunderstanding between the commanding officers of the naval and land forces in and around Santiago and the signal officers of the Army."⁹

Command Conference

On June 20 the American force arrived off Santiago. Admiral William Sampson's chief of staff guided his flagship among the blockading naval vessels. Sailors lined the rails and cheered the troops. Sampson wanted the Army to storm lofty

Morro Castle on the east side of the channel entrance, but Shafter felt the price would be too high.

Sampson and Shafter decided to seek advice from leaders of the Cuban insurrection. The two American officers were pulled ashore with their staffs by a Navy gig and met General Calixto Garcia beyond the coastal cliffs. After Shafter stated his concern, Garcia recommended debarment at Daiquiri, 18 miles east of Santiago, which was acceptable to all parties. As a deception, the Navy bombarded not only that location but other sites simultaneously to distract the Spanish.

On June 1 the joint force still faced the daunting task of getting troops ashore. Long cabled Captain H.C. Taylor, who commanded the convoy: "The Army will probably ask you to assist the landing with the boats of your convoy, and to cover the attempt with some of your small vessels, which may be done, exercising due caution."¹⁰ In the spirit of this message, Sampson agreed to lend the invasion force all the steam launches and pulling boats with crews that could be spared. Furthermore, command of the operation was put under a naval officer, assisted by a beach-master ashore. Cooperation between the services at Daiquiri proved excellent, though arrangements were complicated when some civilian shipmasters commanding Army transports refused to expose their vessels to danger by moving close to the enemy-held shoreline.

After the successful landing, cooperation between the two services deteriorated as the Army proceeded toward Santiago by an indirect route. The Navy urged a more direct attack, although it was reluctant to risk its ships in a head-on engagement by advancing straight into the harbor defenses. Even when the Spanish naval force was destroyed, the Navy refrained from attacking the channel and forts because of fears of mines and artillery. As Long commented, "The international situation... did not permit us to take the risk of throwing our armored vessels away on the mines in Santiago Harbor when there were no Spanish vessels to attack and destroy. We could not afford to lose one battleship."¹¹ Yet, despite debate over the next step in the campaign, and which force should assume greater risk, these disagreements did not end interservice teamwork. Long directed the Navy commander to confer with his Army counterpart to do everything possible to secure the surrender of the enemy, then left the matter to his discretion. From that point Sampson and Shafter ensured the cooperation of their forces through consultation and mutual agreement.

Shafter's troops began a general attack on July 1 and fought several bloody engagements.



Naval Historical Center

**Hoisting flag over
Camp McCalla,
June 1898.**

Two days later some of the Spanish force attempted to escape by sea but were driven back or sunk in sharp exchanges with the U.S. fleet. On July 17 the enemy garrison at Santiago surrendered. Following the success of the Cuban operation, U.S. forces landed on Puerto Rico on July 25 and took control of the island after dealing with token resistance. By the end of the month Spanish opposition in the Caribbean theater had ended.

The American victory was due as much to the weakness of Spain as to strategy and ability. Still it facilitated U.S. dominance in the Caribbean and the annexation of Hawaii, Guam, and Puerto Rico as well as control of the Philippine islands. The United States had emerged as a world power to be duly considered by the nations of Europe.

Operations during the Spanish-American War reflected a profound military transformation. At the same time, flaws in service cooperation demonstrated that the services would have to reshape its capabilities for a new century. Actions during the war offer lessons on the magnitude of that challenge. Army-Navy cooperation was no substitute for joint doctrine, integrated command, and functional capabilities.

NOTES

¹ Theodore Roosevelt, *An Autobiography* (New York: Charles Scribner's Sons, 1920), p. 222.

² John D. Long, *The New American Navy* (New York: Outlook Company, 1903), pp. 162–63.

³ Roosevelt, *Autobiography*, p. 223.

⁴ Russell A. Alger, *The Spanish-American War* (New York: Harper and Brothers, 1901), pp. 14–15.

⁵ Walter Millis, *The Martial Spirit* (Cambridge, Mass.: Literary Guild of America, 1931), p. 256.

⁶ Long, *The New American Navy*, p. 20.

⁷ H.C. Corbin, dispatch to Major General William R. Shafter, May 31, 1898.

⁸ Margaret Leech, *In the Days of McKinley* (New York: Harper and Brothers, 1959), p. 233.

⁹ *Correspondence Relating to the War with Spain*, Vol. 1 (Washington: U.S. Army Center of Military History, 1993), p. 67.

¹⁰ Alger, *The Spanish-American War*, p. 81.

¹¹ Long, *The New American Navy*, p. 24.

Brandenburg Gate in Berlin.



100th Communications Squadron (Brad Fallon)

Resourcing the Force

The Legacy of Cold War Strategy

By RONALD W. MOORE

Throughout the Clinton administration critics have bemoaned shortfalls in resources relative to national strategy and force structure. A lapse in acquisition is frustrating recapitalization efforts and depleting the operations and maintenance account through unprecedented levels of deployment. Some estimate that both the Bottom-Up Review and the Quadrennial Defense Review (QDR) force

structures were underfunded by as much as \$30 billion per year.

The gap between strategy and resources prompted a lively critique of an administration lacking a national security vision. The Clinton approach perpetuated a grand strategy dating back to World War II. Moreover this strategy will guide security policy into the next administration and, together with emerging domestic and international trends, perpetuate a mismatch for the foreseeable future. This will result in both the frequent use of military force in limited-objective interventions and increasing tension in civil-military relations.

Ronald W. Moore is assigned to the Office of the Secretary of Defense and completed this article while attending the National War College.

The Mismatch

The principal factor which contributed to a disconnect between strategy and resources during the current administration is an expansive idea of national security interests together with a mandate to balance the budget. The QDR requirement (echoed in national military strategy) is comprised of three broad and open-ended elements: shaping the international environment, responding to the full spectrum of crises, and preparing now for an uncertain future. The related goal of full spectrum dominance outlined in *Joint Vision 2020* is also a task of boundless proportion.

Despite an ambitious strategy and visionary requirements, spending levels have declined. Military cuts have been an essential part of the administration plan to balance the budget because defense outlays amount to half of all discretionary spending. In constant terms, defense spending is down 30 percent from Cold War levels, and procurement has dropped by 45 percent. The Armed Forces have declined by 20 percent from the base force level of the last administration in terms of active duty personnel as well as active component combat brigades, ships, and tactical air wings.

To marshal assets to support an expansive strategy in times of fiscal constraint, the Clinton administration has sought traditional elixirs: allies, technology, and defense reform. Unfortunately these solutions do not meet the need. Our allies in Europe and Asia remain critically dependent on U.S. military capabilities while America

continues to be ambivalent toward allied efforts to assume a larger security role within their regions. Technological sol-

utions are costly and introduce risk in an environment of asymmetric threats. Reform initiatives, such as streamlining procurement and rightsizing infrastructure, languish under bureaucratic inertia and domestic political agendas.

Thus current strategic ends and available means remain mismatched. This disconnect is not uncommon and reveals the degree of risk involved in strategy. But current strategy breaks down in two respects: the risk has become unacceptable and, more importantly, in failing to link ends and means, the strategy does not inform priorities and tradeoffs to assist in risk management.

Dubious Heritage

The strategy-resource mismatch is a legacy of the Cold War. Its first aspect was the hegemonic strategy adopted by the United States after World War II. America came out of that conflict

militarily preeminent and consolidated its role as a world power by constructing what one former Secretary of State has called "a global liberal economic regime."¹

But as recounted by John Gaddis in *Strategies of Containment*, Washington did not always devote sufficient resources to support its superpower role. He depicts cycles in which various Presidents pursued asymmetric containment with defense strategies such as New Look under Eisenhower and détente under Nixon. Defense assets were deliberately reduced and risks increased even in the face of the monolithic Soviet threat. Cold War security requirements were not fully underwritten even when higher cost symmetric approaches were adopted, like flexible response under Kennedy, since the United States relied on nuclear deterrence to offset conventional disadvantages.

Extended deterrence was another aspect of Cold War strategy that resulted in the mismatch. Our strategy was initially affordable because of overwhelming nuclear predominance, but it became increasingly expensive when the emphasis shifted to conventional forward defense in response to Soviet nuclear forces in the late 1950s.

As the nuclear posture of the Soviet Union increased, so did U.S. forward deployments. By the mid-1980s some 450,000 Americans were permanently stationed ashore in both Europe and the Pacific. Even this expensive posture, combined with the threat of nuclear response, was not our entire deterrent. One key ingredient was sheer political will and declaratory bravado, another element that exceeded tangible budgets.

The third aspect of Cold War strategy was the unprecedented size of the peacetime military. Both the cost and influence of the Armed Forces contributed to an unaffordable strategy. As Samuel Huntington pointed out in *The Soldier and the State*, two facets of the professional military ethic are the emphasis on the magnitude and immediacy of perceived threats and the relentless need to enlarge and strengthen the force. The influence of the military on strategy during the Cold War, given both its ethic and substantial economic and political impact on domestic affairs, inclined the Nation toward a budget-busting defense posture.

Moreover, the size and capability of the Armed Forces throughout the Cold War fueled what has been called the tyranny of means. For most of this period, particularly after the Vietnam War, the United States maintained a world-class military, trained and equipped with advanced weaponry and capacity for unparalleled power projection. Essentially it was too capable not to be employed in pursuit of hegemonic interests yet insufficient to fully accomplish them.

the strategy-resource mismatch is a legacy of the Cold War

VE-Day parade in Red Square, 1965.



AP/Wide World Photos

the end of the Cold War has brought about a repeat of history

The fourth aspect of the Cold War legacy is reflected in program budgeting and acquisition. In search of ever-greater technological advances, and compounded by inefficiencies in procurement practices, defense planners had a systematic bias toward overestimating weapons performance and underestimating life cycle costs. This so-called discipline gap led the Pentagon to produce fewer or less capable weapon systems than stipulated by the funding level. By not providing the budgeted force structure, which was inadequate to implement a hegemonic strategy, dysfunctional planning exacerbated the mismatch.

Future Prospects

Emerging trends will perpetuate the ends and means mismatch. Two important trends are instability and globalization—including economic interpenetration and the revolution in information technology—by heightening the significance of distant events and accelerating their overall impact. As one writer commented, “One awkward corollary of being a global superpower is that anything anywhere in the world involves at least a tenuous tie to some strategic interest.”²

The end of the Cold War has brought about a repeat of history, including crisis and conflict in the nonindustrialized world. These areas will undergo most of the growth in world population, leading to the migration of predominantly young people to urban centers. There, social ills such as disease, overcrowding, unemployment, and crime will be exacerbated, overwhelming inefficient governments. Conflict will breed under these abject living conditions, fueled by cheap and ample conventional weapons and exploited by desperate, ambitious leaders. The resulting conflicts will spread across failed states and produce refugees, displaced persons, and human rights abuses.

Moreover, threats to vital U.S. interests remain, including proliferation of weapons of mass destruction and missile technology as well as the specter of terrorism and cyberwar. In response, complex and expensive programs for missile defense, the militarization of space, and the protection of critical infrastructure will compete for finite defense resources. Also affecting vital interests are the uncertain futures of the brittle and illegitimate regimes in the friendly Gulf states, shifts in the dynamics of power in Asia, and the ever-present question of Russia.

Not only will such risks require greater assets than are likely to be available, but expansive perceptions of the threat tend to intensify. “Each time the United States pushes its security interests



Fighters over northern Germany, 2000.

the United States is not measuring up to its obligation to enforce the rules might call into question its claim to be the hub from which the spokes of the international system extend.”⁴

An unavoidable consequence of hegemony—particularly in a crisis-prone environment—is a continuous pattern of prolonged intervention, often for limited objectives. For the United States, deterrence will be less efficacious because of the nature of intra-state conflict and a growing array of nonstate-sponsored threats. Moreover, inconstant policies in the past have weakened deterrence and thus “made it extremely difficult for the United States to achieve its objectives without actually conducting military operations.”⁵

Intervention for limited objectives goes against the grain of the American way of war, which is identified by strategies of annihilation in support of unlimited war aims. This tradition is marked by conflicts that feature military absolutism and autonomy in which overwhelming force is used to defeat a particular enemy and achieve unambiguous objectives.⁶ Restricting military absolutism or autonomy in future wars is likely to result in greater tension between civilian and military leaders in planning and executing interventions. The tension will increase as the military is persistently asked by its political masters to do more than it can afford, in missions at odds with professional ethics, and with operational and tactical level decisions made under close civilian oversight.

Relations will be further soured by competition among the services for scarce resources and the difficulty of obtaining increased funding absent a classic threat on the horizon.

JFQ

NOTES

¹ Benjamin Schwarz, “Why America Thinks It Has to Run the World,” *The Atlantic Monthly*, vol. 277, no. 6 (June 1996), p. 93.

² Anthony Cordesman, *The Lessons and Non-Lessons of the Air and Missile War in Kosovo: Summary Briefing to the USAF/XP Strategy Forum* (1999), p. 11.

³ Christopher Layne, “Rethinking American Grand Strategy: Hegemony or Balance of Power in the Twenty-First Century?” *World Policy Journal*, vol. 15, no. 2 (Summer 1998), p. 18.

⁴ Andrew J. Bacevich, “Policing Utopia: The Military Imperatives of Globalization,” *The National Interest*, no. 56 (Summer 1999), p. 11.

⁵ Barry M. Blechman and Tamara C. Wittes, “Defining Moment: The Threat and Use of Force in American Foreign Policy,” *Political Science Quarterly*, vol. 114, no. 1 (Spring 1999), p. 5.

⁶ Russell F. Weigley, *The American Way of War: A History of United States Military Strategy and Policy* (Bloomington: Indiana University Press, 1973), p. xxii.

outward,” one observer noted, “threats to the new security frontier will be apprehended.”³

Turning to the domestic scene, two trends likely to sustain the mismatch are demographic shifts and political consensus. Compared with the end of the Cold War, minorities are projected to grow from 25 to 35 percent of the national population by 2020, with the proportion of those who are foreign-born or second-generation forecast to increase from 40 to 55 percent. With so many people with foreign ties, political constituencies may be more attuned to international affairs. Also, Americans aged 65 and over will be the fastest growing segment, estimated to move from 12 to 17 percent. The graying of the population will exacerbate constraints on discretionary outlays, which in turn will compete with defense budgets.

More importantly, there is a domestic consensus firmly in favor of a major national role in world affairs. This is underscored by the convergence of competing political groups in support of proactive hegemony. Compare, for example, the neoconservative veterans of the Reagan era who still advocate activism on the world stage and neo-liberals who promote intensified engagement and shaping, under the rubric of preventive defense.

A contrary position, that the Nation should share substantial responsibility for maintaining the global liberal economic regime, requires unacceptable constraints on our freedom of action and is out of step with the political mainstream, which wants to maintain the role as world leader. As one analyst concluded, “Any suggestion that

General Thomas Dresser White

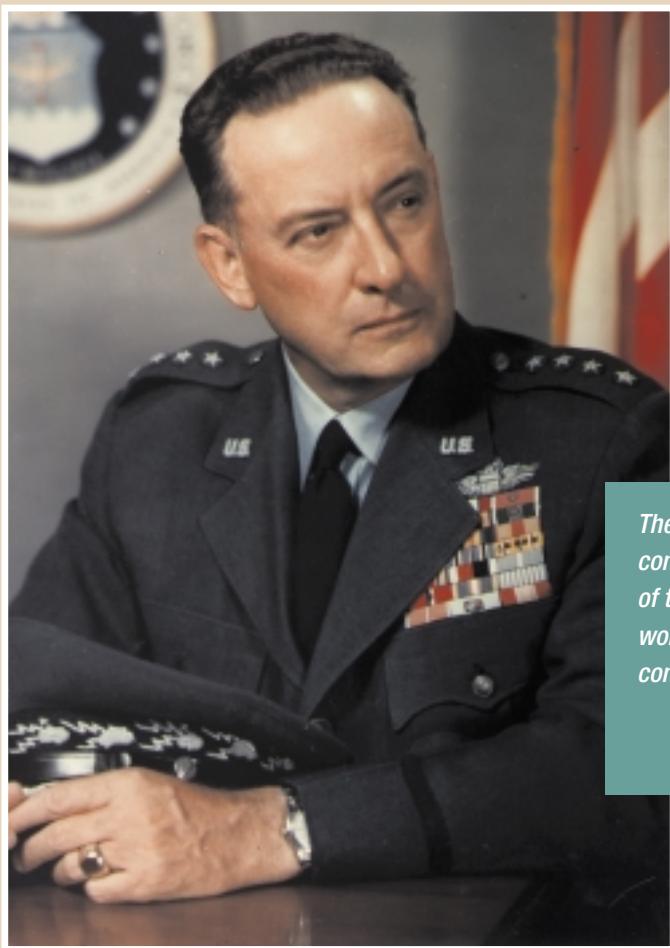
(1902–1965)

Chief of Staff, U.S. Air Force

VITA

Born in Walker, Minnesota; graduated from U.S. Military Academy (1920); completed infantry school (1921); served with 14th Infantry (1921–24); attended primary and advanced flying school (1924–25); 99th Observation Squadron (1925–27); studied Chinese language in Peking (1927–31); served at Headquarters, Air Corps (1931–34); appointed assistant military attaché to Russia (1934) and Italy (1935); completed Air Corps tactical school (1938) and command and general staff school prior to being assigned to Office of the Chief of Air Corps; appointed military attaché and chief of U.S. military air mission to Brazil (1940); served as assistant chief of staff for

operations and chief of staff, Third Air Force (1942–44); named assistant chief of air staff for intelligence and deputy commander, Thirteenth Air Force (1944); commander, Seventh Air Force (1945–46); chief of staff, Pacific Air Command (1946–47); commander, Fifth Air Force (1947–48); director of legislation and liaison, Office of the Secretary of the Air Force (1948–50); Joint Strategic Survey Committee, Organization of the Joint Chiefs of Staff (1950–51); director of plans and deputy chief of staff for operations, Headquarters, U.S. Air Force (1951); named Vice Chief of Staff (1953) and Chief of Staff (1957); died in Washington, D.C.



The United States must win and maintain the capability to control space in order to assure the progress and pre-eminence of the free nations. If liberty and freedom are to remain in the world, the United States and its allies must be in position to control space.

—General White quoted in *The Aerospace Force: Defending America in the 21st Century*.

U.S. Air Force

Doctrine

MULTINATIONAL OPERATIONS

Joint Publication 3-16, *Joint Doctrine for Multinational Operations*, recounts the characteristics and complexities of multinational operations. This volume has been under development for some years and was the subject of an article entitled "Making the Case for Multinational Military Doctrine" by Jay M. Vittori which appeared in *Joint Force Quarterly* (Spring 1998). Even though most of the principles and processes described in this publication can be applied to unilateral military operations, it is focused on larger multinational issues. Overcoming differences on viewpoints and capabilities requires the attention of force commanders, their staffs, and associated personnel.

The first chapter points out that multinational operations rest on a difficult political foundation: achieving and maintaining sufficient cohesion between two or more nations to integrate their forces to achieve a common objective. Whether an operation involves existing agreements in an alliance or temporary arrangements in a coalition, each requires significant efforts to overcome the challenges presented by multinational planning and execution. Decisions to visit unity of effort and effective control on multinational operations affect political unity. Obstacles in direction, coordination, and support increase with differences in doctrine, capabilities, language, and culture and should be met with deftness to build trust among nations, leaders, and institutions through personal contact and liaison efforts. This volume also reveals that there is no simple solution. Each operation is unique because of converging interests, capabilities, and the degree of familiarity of the participants.

The next chapter discusses command and control over forces under more than one national chain of command. The three basic options for command are: integration under a lead nation, in parallel with some form of coordination cell, or a combination of both. Only the lead nation option ensures unity of effort, while a parallel structure or combination requires at least two multinational force commanders. This chapter reviews considerations for selecting the most appropriate option.

The third chapter evaluates planning and execution of multinational operations. Processes such as mission analysis must master the increased coordination and decisionmaking involved in combining the interests and objectives of two or more national militaries as well as their respective governments. Planning and execution steps require conscious efforts to increase respect, rapport, knowledge, and communication at every step.

The final chapter examines operational concerns in various environments—land, maritime, air, and space—as well as information operations, search and rescue, et al.

A series of appendixes contains a listing of questions on multinational planning, descriptions of multinational operations involving significant American participation, and a compilation of major references. A three-page glossary of abbreviations and acronyms is followed by a six-page listing of terms and definitions.

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ALLIED PUBLICATIONS

NATO recently ratified several doctrinal publications: AJP-01(A), *Allied Joint Doctrine*; AJP-4, *Allied Joint Logistics*; AJP-3.3, *Allied Joint Aerospace Operations*; AJP-4.10, *Allied Joint Medical Support Doctrine*; AJP-3.6, *Electronic Warfare*; and AJP-4.6, *Multinational Joint Logistics Center*. Other pubs under development include AJP-2.2, *Counterintelligence and Security*; AJP-2.5, *Handling Captured Personnel, Equipment, and Documents*; AJP-3, *Allied Joint Operations*; AJP-3.4.1, *Peace Support Operations*; and AJP-4.5, *Host Nation Support*.

JFQ

GROUND FORCE COMMANDER

The Army and Marine Corps are developing a *Joint Force Land Component Commander (JFLCC) Handbook* that focuses on multiservice tactics, techniques, and procedures. The final coordination draft has been released for review. Approval and distribution is programmed for November 2000. In addition, at the Joint Doctrine Working Party meeting held in April 2000, the Army proposed developing a joint pub on JFLCC operations. The proposal was approved and designated Joint Pub 3-31, *Command and Control for Joint Land Force Operations*. JFQ

MULTISERVICE SOLUTIONS

The mission of the Air Land Sea Application (ALSA) Center is developing publications and studies on multiservice tactics, techniques, and procedures which facilitate joint information exchange and operational solutions for warfighters. Anyone can recommend a project. Once a void in existing multiservice procedures is identified, the subject is forwarded to a joint actions steering committee representing the doctrinal commands and comprised of general/flag officers from all services who decide whether to pursue a project. Once a program is approved, the services are asked to provide subject matter experts to meet at ALSA, where action officers act as facilitators with service experts to develop multiservice solutions. Approved solutions are often produced within a year.

Current projects include Army-Marine Corps integration, aviation in urban terrain, bomber-maritime operations, brevity codes, explosive ordnance disposal, combat airspace command and control, air and missile defense coordination, risk management, suppression of enemy air defense, defense of fixed sites, theater missile intelligence preparation of the battlefield, and an introduction to the tactical digital information link.

Further information on ALSA can be found at <http://www.dtic.mil/alsc>. JFQ

Education

PHASE I PJE

During academic year 1999–2000, the Naval Postgraduate School (NPS) and Naval War College developed a tailored program leading to a diploma from the College of Naval Command and Staff, including phase I certification under the Program for Joint Education (PJE). The relevant courses are offered by faculty members of the Naval War College who are permanently assigned to NPS. A three-course sequence meets the requirements of professional military education as established by the Chief of Naval Operations and approved through accreditation of the College of Continuing Education at the Naval War College. Moreover, the program covers all mandatory learning areas outlined in the CJCS officer professional military education policy.

The program presents courses in strategy and policy, national security decisionmaking, and joint maritime operations. In September 1999 the strategy and policy curriculum replaced maritime strategy courses. The joint maritime operations and national security decisionmaking courses can replace or supplement other offerings and be taken voluntarily. Phase I credit can only be earned by completing a three-course sequence: strategy and policy, national security decisionmaking, and joint maritime operations. To provide maximum flexibility, the NPS program offers daytime and evening classes or mentored independent study. All versions of the courses are academically rigorous.

The program enables students to earn a degree from NPS, a diploma awarded by the Naval War College, and credit for phase I PJE. Students who cannot complete all diploma requirements at NPS can enroll in the remaining courses by seminar or correspondence through the College of Continuing Education at a subsequent duty station. Additional information is available in the Naval Postgraduate School catalog at <http://www.nps.navy.mil>.

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JFQ ESSAY CONTEST

The two winners of the 1999–2000 *Joint Force Quarterly* Essay Contest on Military Innovation are LTC Antulio J. Echevarria II, USA, who took first prize with an entry focusing on a strategic and operational concept to integrate imperatives described in *JV 2020*, and LTJG Shannon L. Callahan, USN, who won both the second and junior officer prizes with an essay on military applications of nanotechnology to future warfare and strategic competition.

The number of essays submitted in 1999–2000 was more than double those in the previous contest. Moreover, 52 percent of the essays were entered by military officers in the rank of major or lieutenant commander or below. Of the contestants, 26 percent were Army, 10 percent Navy, 8 percent Marine Corps, and 35 percent Air Force. The balance of the entrants were civilians. Of the military entrants 8 percent were members of the Reserve components.

The winning entries and other selected essays from the contest will be published in issue 26 (Autumn 2000) of the journal.

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New from NDU Press

Essays 2000

Presenting the winners
of the 19th annual
essay competition:

Charles K. Hyde

“Casualty Aversion: Implications for Policymakers and Senior Military Officers”

William J. Bayles

“Moral and Ethical Considerations for Computer Network Attack as a Means of National Power in Time of War”

John G. Fox

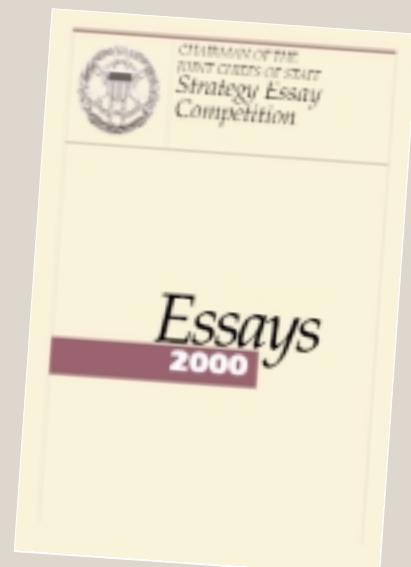
“Approaching Humanitarian Intervention Strategically: The Case of Somalia”

Douglas B. Rider

“Establishing a Commercial Reserve Imagery Fleet: Obtaining Surge Imagery Capacity from Commercial Remote Sensing Satellite Systems during Crisis”

John F. Kirby

“Helping Shape Today’s Battlefield: Public Affairs as an Operational Function”



GPO on-line: access.gpo.gov/su_docs/sale.html

CRISIS IN KOREA

A Review Essay by
DON OBERDORFER

Korea on the Brink: From the "12/12 Incident" to the Kwangju Uprising, 1979-1980

by John A. Wickham
Washington: National Defense University Press, 1999.
241 pp. \$20.00
[ISBN 1-57906-023-4]

Massive Entanglement, Marginal Influence: Carter and Korea in Crisis

by William H. Gleysteen, Jr.
Washington: Brookings Institution Press, 1999.
242 pp. \$17.95
[ISBN 0-8157-3170-1]

The period between the assassination of President Park Chung Hee in October 1979 and full American acceptance of his strong arm successor in early 1981 was among the most violent in modern Korean history—and most dangerous in U.S.-Korean relations. In that short time, Park's 18-year regime ended at the hands of his intelligence chief; a coup in the night installed an obscure general, Chun Doo Hwan; brutal suppression of a revolt by Chun fueled fierce domestic emotions that have never entirely subsided; and a secret deal struck between Chun and the incoming administration of President Ronald Reagan provided tangible proof of American recognition of Chun in return for commuting a death sentence imposed on a prominent Korean dissenter, Kim Dae Jung.

General John Wickham, USA, commander of U.S. and U.N. forces in Korea, and Ambassador William Gleysteen, the senior American diplomat on the scene, were at the helm of U.S. military and political power in Seoul at the time. Working independently, they have produced accounts of their respective roles in these turbulent events. And fortuitously, *Korea on the Brink* by Wickham and *Massive Entanglement, Marginal Influence* by Gleysteen appeared within weeks of each other. Together these books constitute an extraordinary record of the situation in Seoul and the American response. Both men substantially enlarge our knowledge of this crucial period.

Don Oberdorfer is the author of *The Two Koreas: A Contemporary History*.

Wickham, who concentrates on developments in Seoul, offers gripping details on the death of Park, including an insightful portrait of his assassin, Korean CIA Director Kim Jae Kyu, and substantial new material on maneuvering within the South Korean military which followed. His account is presumably based on official reports since the work lacks source notes.

Gleysteen emphasizes the political deliberations between Washington and Seoul but is less detailed on events in Korea. His narrative begins earlier than Wickham's, offering background on efforts by President Jimmy Carter to withdraw U.S. troops from Korea, which Gleysteen observed as an official in the State Department before becoming ambassador and which he thinks contributed to Park's assassination. Gleysteen also takes his account beyond Wickham's, including efforts to protect longtime opposition leader Kim Dae Jung in late 1980 and early 1981, in which Washington assumed a decisive role. Putting minor differences aside, the general and the ambassador observed the key actors and events through remarkably similar eyes.

It was probably inevitable given the circumstances that Wickham became deeply involved in political issues as Gleysteen assumed a major role in military affairs. Civil-military differences in overseas operations would have been disruptive in such a crisis. Fortunately for

the United States, both men were seasoned professionals and highly regarded at home. Each respected the other, as their accounts make clear, while at the same time recognizing the differences in their assignments.

The two books provide tangible evidence of the crucial roles of CINCs and ambassadors in policymaking. Wickham and Gleysteen received great leeway by their masters in Washington and, in Wickham's case, by the Commander in Chief, Pacific Command, in Honolulu. Moreover, what they suggested from the field was usually adopted as policy by their superiors. Part of the reason is that the seizure of the American embassy in Iran only days after the assassination of Park and the invasion of Afghanistan by the Soviets in December 1979 distracted attention from Korea, making micromanagement less practical for Carter and his aides. Another factor was that U.S. officials on the scene have historically played significant roles in Korean policy (Carter's proposed withdrawal of U.S. troops, an initiative of uncertain origin, is one notable exception.) Even today, ambassadors and CINCs are living proof that—at least in Korea—such officials are not simply messengers.

Nonetheless, the conclusions that Wickham and Gleysteen reach are not how powerful they were in dealing with Korean affairs, but how powerless. The title of Gleysteen's book succinctly captures that view, which Wickham also shares. "The era of America's paternal influence over the [Republic of Korea]

**Gleysteen and Wickham
in Seoul, 1981**



Courtesy of John A. Wickham

had passed," declares the general. "Any-one who believed that we were in any position to order a halt to this coup was badly out of date." Later, after Chun had suppressed the rioting in Kwangju and moved toward assuming the presidency, Wickham remembers thinking that "we were little more than helpless bystanders as Chun shrewdly maneuvered toward total power."

The fundamental limitation on their leverage, as both realized from the start, was the nature of American involvement on the bitterly divided peninsula. U.S. military presence, represented by 37,000 members of the Armed Forces half a century after the armistice, is intended to deter hostile action from the North and provide leadership and muscle if deterrence fails. Any open or extended discord in the ROK military, or between American and South Korean leaders, risks undermining deterrence and encouraging North Korea to intervene. Wickham recalls the reflexive message from Secretary of Defense Harold Brown in conveying the news of Park's demise. "Assassins have just killed Park Chung Hee," Brown announced by telephone to Wickham, who had just arrived home on a scheduled visit. "We're worried that the North Koreans might capitalize on the confusion by attacks with their agents in South Korea or, worse, by an attack along the demilitarized zone." There is little evidence that Pyongyang did anything to exploit the turmoil in Seoul other than spread propaganda and unsuccessfully infiltrate agents, but the possibility of intervention was a priority for U.S. policymakers. As Gleysteen indicates, "Our security commitment and military presence in South Korea inevitably became overriding concerns in times of upheaval, largely because of the threat we perceived from North Korea."

Both Wickham and Gleysteen were opposed to the coup organized by Chun but powerless to reverse its course without endangering South Korean security. At the moment of crisis, Wickham found that his command of ROK forces facing the North was merely theoretical, as units left assigned positions without permission. Neither he nor the ROK leadership whose units were being outflanked had any but the sketchiest ideas of what was happening. "Even after all these years, I still consider [Chun's] actions immoral and harmful . . . motivated almost completely by personal gain," Wickham writes. Yet both he and Gleysteen rejected a proposal at the time for a countercoup secretly presented by a senior ROK officer who claimed to speak

for a faction ready to restore constitutional authority by force. As the general and the ambassador saw it, the prospect of a shootout within the army was fraught with grave danger. Few other decisions caused Gleysteen such personal anguish: "I deeply regretted having to blight an effort designed to 'correct' [the coup] but felt that to encourage a struggle within the Korean army would have been madness."

The most controversial development confronting both men—one still politically charged in South Korea—was action by ROK special forces and other troops in viciously suppressing the insurrection in Kwangju at a high but undetermined cost in lives. It was the home area of Kim Dae Jung, whose arrest by Chun ignited public demonstrations that turned into organized revolt. Many Koreans hold the United States partly responsible for what is known as the Kwangju massacre because of a belief fostered by Chun that the U.S. command authorized the use of deadly force by releasing units which attacked civilians from other duties.

As both men have done in the past, Wickham and Gleysteen seek to set the record straight by indicating that ROK special forces units which did most of the killing had never been under American command and that the 20th ROK Infantry Division, which restored order with far less loss of life, had been withdrawn from U.S. control before the uprising. Wickham discloses that he was more involved in proposals to use the 20th Infantry Division troops than previously known, but he and Gleysteen disclaim prior knowledge of what ROK special forces planned to do. However, given the complex situation and persistence of strong emotions which persist to this day, it is unlikely these books will quell passions about Kwangju among South Koreans.

As both authors acknowledge, the efforts they recommended and implemented were ineffective in curbing Chun during the period covered in their books. They do considerable soul-searching in the final analysis over what more they could have done.

Wickham, who does not hide his anger at Chun and his associates, concludes that a coup was probable if not inevitable after the death of Park but that there was little he or his command could have done to stave it off. He recounts that the policy of keeping Chun at a distance after he seized power and pressuring Chun to abide by constitutional processes was "fundamentally sound" if marginally successful. He expresses doubt over symbolic penalties initially levied against Chun, such as postponing the security consultative meeting or withholding foreign military sales credits. He suggests instead that vigorous economic sanctions might have generated more public protests against Chun but does not deal with the instability that could have ensued.

Gleysteen remembers that he could think of "no measures that would have altered the basic character of a contest between domestic forces over which we had little if any real control." He is more philosophical than Wickham about Chun and his actions, noting that the regime turned out to be relatively competent though highly unpopular and that because of internal pressures it ultimately gave way to restoration of legitimate democratic rule. A large part of Gleysteen's anger is directed at Carter's "ill-conceived and ill-timed" initiative to withdraw American troops and the "abrasive, confrontational" implementation of human rights policies.

Based on these well-written and well-reasoned books, the lesson is that U.S. power, while of great importance to the military balance on the peninsula, was a minor factor in the calculations of those who sought and wielded power in South Korea. This is more true today than in 1979-81. But it is also true that the end of the Cold War altered the nature and dimensions of U.S. stakes in the region. A repeat of the unpalatable incidents contained in these two books would probably generate much stronger U.S. reactions, economic as well as political, than when their authors were assigned to Seoul. Militarily such events, which seem unlikely today, could tempt the body politic in this Nation to reconsider its firm commitment to the security of South Korea.

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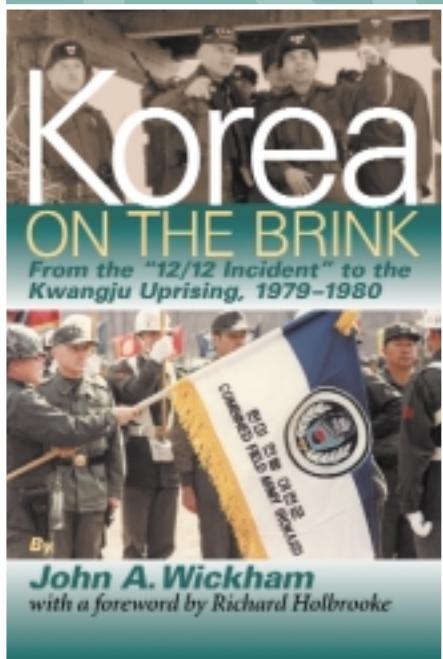
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by John A. Wickham



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—from the preface to *Korea on the Brink*

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REINVENTING MILITARY INSTITUTIONS

A Book Review by
IAN ROXBOROUGH

The Postmodern Military: Armed Forces after the Cold War
Edited by Charles C. Moskos,
John Allen Williams, and David R. Segal
New York: Oxford University Press, 2000.
286 pp. \$45.00
[ISBN 0-19-513328-5]

There have been profound changes in the nature of military institutions in recent years. As wars have become less prevalent and threat perceptions have evolved, militaries have increasingly taken on peacekeeping and humanitarian operations. They are also being reduced to smaller professional forces of volunteers with the support of more civilian employees. There is more jointness. The role models for officers are gravitating from the warrior and manager to include the soldier-scholar and soldier-statesman. Postmodern militaries include more women, are more tolerant of homosexuals, and accept a greater separation of family from institutional life. Moreover, as militaries are civilianized, soldiers and their civilian counterparts look more alike. In moving away from the citizen-soldier armies of the modern period, and as nation-states loosen their grip on the imagination of citizens, public attitudes are growing more apathetic. As armed forces decline in prestige, there is more tolerance for conscientious objection. Finally, militaries are engaging the media actively and positively.

The cluster of sociological changes that define the emerging militaries of the 21st century are the dominant theme of *The Postmodern Military*. Edited and written by leading military sociologists, this book may be the most authoritative study of the sociological basis of contemporary militaries in print. A first-rate work, it brings serious research to bear on important policy issues.

The editors offer a far-ranging introduction by placing current changes in historical context. The chapter on the

United States by the dean of American military sociologists, Charles Moskos, summarizes the state of research and establishes the Armed Forces as the model against which to compare those of other nations. This is followed by chapters on Britain, France, Germany, the Netherlands, Denmark, Italy, Canada, Australia, New Zealand, Switzerland, Israel, and South Africa which shift the evidence to determine whether the postmodern label applies. Not only does this approach provide an opportunity to evaluate the postmodern thesis, but it offers a vital comparative perspective. While they have many trends in common, marked differences exist among the countries. Moreover, there is ample disagreement among authors to provoke reflection.

If readers are tempted to quibble over the use of the term *postmodern*, it should be noted that the authors apply it largely as a synonym for post-Cold War and are not committed to the rhetorical and philosophical excesses normally associated with postmodernist social science theories. Since the term essentially means contemporary or present, readers are free to apply whichever label seems to be the most congenial.

A more critical issue is whether the cluster of identified trends is as coherent as suggested by a single model. Greater female participation in the labor market and growing divorce rates, both of which result in the separation of military family members from institutional military life, have been underway for decades independent of the end of the Cold War. Nor is it clear that issues of cultural diversity and lifestyle, increasing tolerance of homosexuality, or diminishing identification with the nation-state are bound up with other dimensions of the model. Indeed, some contributors point out this fact. It is also striking how issues such as race and ethnicity, or intense politicizing of gay rights, a factor so salient in the United States, are more muted elsewhere. This raises the question of whether the authors have really discerned a global

trend from modern, through late modern, to postmodern, or have focused on what is in fact a coincidence in time and place of largely unrelated trends. The various dimensions of the model may need to be disaggregated and examined in detail to determine their relationship.

The Postmodern Military has ramifications for the meaning of professionalism. Officers will have to be more broadly educated in political, cultural, and other affairs. This volume suggests that such a trend will produce new role models for officers. Less clear are the implications of postmodernity for the nature of warfighting. Here the emphasis by the contributors on embracing peacekeeping and humanitarian intervention has diverted attention from the impact of sociological change on how postmodern militaries fight. This book raises but does not answer these provocative questions. If there is less commitment to the nation-state, what will motivate warfighters? What conflicts of interest might ensue? Will more socially and culturally diverse militaries affect small-group cohesion in combat?

This volume poses further questions for a research agenda. The editors have done a great service by moving beyond the United States to other countries; but most are either European or of largely European settlement. A comparative volume that looks at militaries in what was formerly known as the Third World is needed. How has postmodernity affected militaries in those nations? What might such perspectives suggest about the nature of military institutions and the frequency of war in other regions of the world? It is outside the core countries of the West that America's future enemies are likely to be found. Perhaps there is a dark side of postmodernity in the Third World that must be understood as much as sociological changes in Western militaries, about which this volume is informative and rewardingly thought-provoking.

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Ian Roxborough is professor of history and sociology at the State University of New York at Stony Brook.

STRUGGLES FOR NATIONAL SURVIVAL

A Book Review by

ANTULIO J. ECHEVARRIA II

**On the Road to Total War:
The American Civil War and
the German Wars of Unification,
1861-1871**

Edited by Stig Förster and Jörg Nagler
Cambridge: Cambridge University
Press, 2000.
705 pp. \$100.00
[ISBN 0-5215-6071-3]

The essays collected in *On the Road to Total War* make worthwhile reading for anyone interested in American or German history, or military history in general. It represents the first in a projected series of five volumes based on papers from conferences held in the United States and Germany on the contentious topic of total war. This volume addresses problems concerning national survival within the context of the American Civil War and the German Wars of Unification, which can be regarded as defining events of the 19th century. The other volumes in this series (which will be reviewed in future issues of this journal) focus on the periods leading up to World War I, the interwar years, and World War II. The editors of the book at hand, Stig Förster and Jörg Nagler, have done a superb job of arranging the essays, though some have little to do with total war per se beyond references in the introductory and concluding paragraphs. The value of this collection isn't the answers that it offers on total war, but rather in the fact that it enlarges the understanding of what soldiers and civilians, generals and statesmen, and their contemporaries thought was at stake in two major conflicts of the 19th century, how prepared they were to sacrifice blood or treasure to win, and whether in the end they believed that what was gained was worth the price.

The first set of problems considered in this book deals with basic questions of definition and correctness in comparison, concerns that have plagued historians for years. Indeed, a suitable definition of total war remains elusive. Part of

the problem is perspective. When compared to the so-called cabinet wars of the 18th century, the wars of the 19th century seem to have become more total in terms of ends, ways, and means. However, in comparison to the wars of the classical age, or those of the 16th, 17th, or even 20th centuries, this observation does not hold up. To complicate matters, one can find exceptions in the past to prove any rule. Not surprisingly then, the essays by Förster and Nagler only discuss a few possible definitions of total war, all of which have limitations, and leave readers to develop their own. A subsequent essay by Mark Neely reminds us that the notion of total war can be defined so totally that no conflict, let alone the Civil War, would qualify. Carl Degler concludes this section of *On the Road to Total War* by reconsidering conventional ideas on the similarities and differences between the emerging American and German nations and how they might affect an investigation of total war.

The second set of problems concerns nationalism and leadership. Essays in this section by Richard Beringer, Hans Trefousse, Stig Förster, and Edward Hagerman examine the relationship between national or regional identity and the will to fight, political and cultural mobilization, and the interplay between political and military leaders in developing strategy. The basis of a soldier's identity and its relation to his will to fight have been objects of study since the mid-19th century at least. Schools of thought differ over whether the dynamics are ideological or psychological. The essays by Beringer and Trefousse reveal that the soldier's identity, as well as that of the population at large, was not only complex but situational. Whether rebels saw themselves as Confederates, Virginians, or natives of Richmond depended largely on the context within which one or more of their loyalties came into play. Förster and Hagerman explore the relationship between the logic of policy and grammar of war from the standpoint of people's war and an increasingly industrialized democracy faced with being ripped apart by civil war.

The third section focuses on mobilization and warfare. Essays by Herman Hattaway, Arthur Marwick, Joseph Glatthaar, Stanley Engerman, Matthew Gallman, Ulrich Wengenroth, Manfred Messerschmidt, William Serman, James McPherson, and Wilhelm Deist address problems such as creating, mobilizing, and developing armies; the impact of

industry and economics on warfare; the significance of military reform; and the conscious or unconscious shift in conception from limited to total war (even if the latter term didn't come into common usage until much later). The extent of political, cultural, economic, and military mobilization required for modern combat has long served as a discriminating criterion for the question of total war. Total mobilization equaled total war, at least with regard to the question of means in the ends-ways-means equation. But as these essays indicate, this measure is no longer adequate. Though the resources used to wage the Civil War far exceeded those of previous American wars, not every available resource was engaged. Similarly, many resources were left untouched in France and Germany. It is unlikely that history will ever reveal a truly total war in the Hobbesian sense, where every soul is a combatant and every asset is a weapon, because achieving that condition would demand perfect bureaucratic efficiency in terms of mobilizing all dimensions of national power throughout a war. It would also make war an end in itself by depriving political and military leaders of the opportunity to select only those ways and means most likely to produce success. Perhaps more than any other, this part of the book focuses on the inadequacy of current definitions of total war.

In the fourth section, Jörg Nagler, Phillip Paludan, and Donna Krug explore the home front in the Civil War, while Alf Lüdtke, Stephane Audoin-Rouzeau, and Jean H. Quataert do the same for the Franco-German War. Although some essays suffer from an excessive use of jargon, they shed light on the importance of public opinion, the role of women, and the idea that the homeland served as another front that had to be protected and cultivated (or propagandized) in support of actions on the battlefield. Such recognition has become prevalent with the advent of sociological and gender studies. It is practically a truism to say that generals win battles but popular commitment wins wars. Here the traditional notion of total war proves inadequate. Although the full mobilization of society is nearly impossible, women and minorities in 19th century America, Germany, and France, who were previously untouched by mobilization, found themselves engaged in complex ways. But the changes in traditional social and gender roles during the course of conflict might reveal more about the phenomenon of total war than the segment of the population mobilized.

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U.S. Army

The next problems pertain to the reality of war. Earl Hess, Thomas Rohkramer, Michael Fellman, Robert Tombs, Reid Mitchell, and Manfred Botzenhart look at the experience of combat within the context of total war to determine whether it was in some way more total than previous wars. The subjects covered include new tactics and technologies, guerrilla fighting, siege warfare, and life as a prisoner of war. These historians have set themselves a tall task, for by most accounts war is always total for those on the sharp end of the bayonet. We simply can't determine whether the reality of combat was any more terrible (or total) for a Roman legionnaire at Cannae than for a Union infantryman at Gettysburg. Only in the eye of a historian, whose perspective is long term, do such differences exist. The best that an historian can do is identify the changes that occurred in warfare and attempt to interpret how those changes affected those who experienced them. These challenges notwithstanding, scholars, students, and especially soldiers will find this section useful for its many details on combat in the mid-19th century.

The sixth part of the book focuses on the legacies of the Civil War and the German Wars of Unification. Jay Luvaas addresses the influence of the Prussian

model of warfare on U.S. military institutions from 1871–1914, Richard Current examines the effect of the Civil War on the rise of America as a world power, Gerd Krumeich investigates the influence of people's war on German and French thinking up through World War I, and Annette Becker explores the ways in which war memorials defined the last war while creating expectations for the next. National and military legacies are often neglected in efforts to understand the phenomenon of total war. Perhaps the criteria for comprehending the character of war should extend beyond casualties and devastation to include how the course of history was changed.

In the concluding chapter, Roger Chickering provides some useful comments on the simultaneity and historiographical legacies of these wars, the organizational and institutional dissimilarities of participating armies, and whether the conflicts can be considered the precursors of total war. On the last count, he seems to surmise that the Franco-German War was the quintessential case of massive mobilization for limited aims, while the issue in the case of the Civil War remains divided into two camps (represented by McPherson and Hagerman on one hand, and Neeley on the other). Chickering also concludes that *Volkskrieg* (people's war), an important phenomenon in both wars, served

more as a specter than a model of future warfare. However, other research suggests that *Volkskrieg* evolved between 1871 to 1914 into the concept of national war, meaning a conflict that involved the full extent of national power. The work of Colmar von der Goltz, Fritz Hoenig, and the younger Moltke emphasized that this was the war of the future and show that German military thinking was headed in this direction and was not alone. American, British, French, and Russian theorists held similar views. The point is that some notion of total war existed before 1914, even if the term was coined somewhat later.

After reading the 32 essays in *On the Road to Total War*, one cannot help but conclude that Clausewitz's trinitarian structure for understanding war—as a function of the interplay of political forces, enmity, and chance—was correct after all. It is ultimately far more interesting and useful to consider the character of war in such a framework than to regard it as suggesting an ultimate *telos*, or compare it to an ideal construct such as total war, which none has yet or likely ever will attain. On this point at least the contributors to this volume, for whom consensus is a rarity, might agree. In any case, readers should draw their own conclusions from this volume.

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A REVOLUTION IN NAVAL AFFAIRS?

A Book Review by

DAVID R. METS

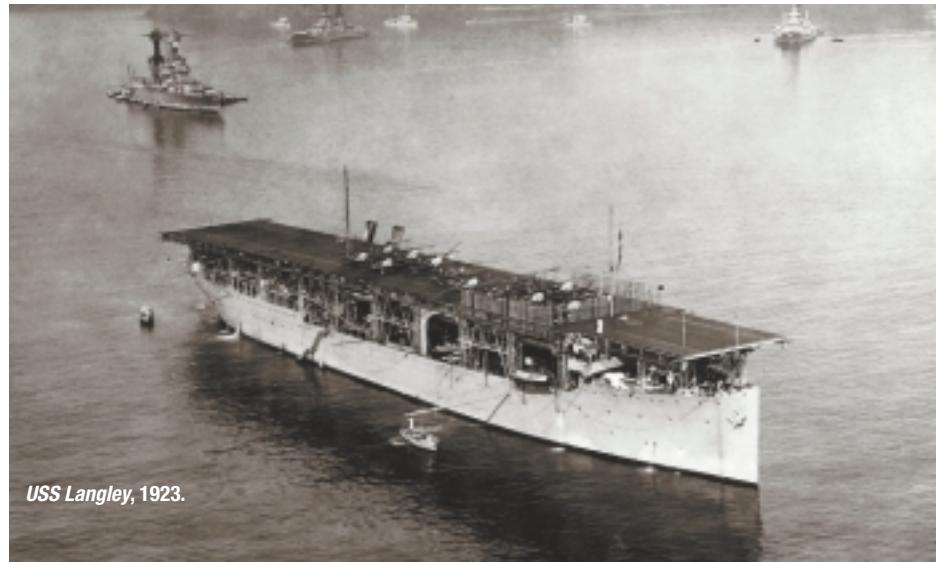
American and British Aircraft Carrier Development, 1919–1941
by Thomas C. Hone, Norman Friedman, and Mark D. Mandeles
Annapolis, Maryland: Naval Institute Press, 1999.
280 pp. \$39.95
[ISBN 1-5575-0382-6]

The Royal Navy held a substantial lead in aircraft carrier development in 1919. But by 1941 it was largely out-classed in doctrine, organization, and technology by the United States. The conventional explanation is that the air prospects of the Royal Navy were ruined in 1918 when the Royal Air Force (RAF) was established and given responsibility for military aviation. *American and British Aircraft Carrier Development, 1919–1941*, reveals that there is more to the story. The book explains the more rapid naval advances in the United States than in Great Britain.

One can hardly imagine a better group of authors to build a synthesis. Norman Friedman is one of the leading specialists on naval studies in America, Thomas Hone has done much of his research on naval affairs in the interwar period, and Mark Mandeles has focused on command and control, organization, and innovation. Together they bring expertise on strategy, institutional culture, and technology to the subject at hand.

Britain had three carriers on the line during World War I while the United States had none. But many American officers who served in Europe went home impressed with aviation in the Royal Navy and were determined to do something about it. They had the additional stimulus of the campaigns of General Billy Mitchell, which threatened to bring the RAF model to America. From the outset, the concern was that the great advantages of aviation for naval warfare would not be realized if the Navy did not control every dimension of its growth.

David R. Mets is a professor in the School of Advanced Airpower Studies at the Air Command and Staff College.



USS Langley, 1923.

This book indicates that part of the British problem indeed resulted from creating a separate air force responsible for all military aviation. But that was one factor among many and the authors do not dwell on it. They acknowledge that RAF operations won the Battle of Britain. The pilots serving onboard carriers were RAF officers until 1937, and their advancement was linked to their parent service. Thus the commanders of British carriers at the onset of war were not aviators. But neither did the Royal Navy have an officer like Admiral William Moffett, a bureaucratic politician of the first order with impeccable battleship credentials (having sailed with Alfred Thayer Mahan). Nor did it have a powerful organization like the Bureau of Aeronautics to act as an advocate of aviation and provide a protected career track for young flyers. Still less did it have an imaginative officer like Admiral William Sims at the helm of a war college with a long gaming tradition.

Sims and others at Newport were testing naval aviation concepts well before *USS Langley* joined the fleet. Ideas that emerged from wargaming boards plus those drawn from experiences of the Royal Navy with early carriers contributed to concepts that helped win the war in the Pacific. Neither Sims nor other gun club admirals of the General Board of the Navy fit the stereotypes of battleship sailors or mossbacks that branded a generation of leaders. Far from being close-minded, they provided much of the thinking before it was possible to experiment with carriers at sea.

Nor did the Royal Navy have an equivalent of Admiral Joseph Reeves.

Although not a pilot himself, Reeves played an essential role by operationalizing concepts emanating from the General Board and Naval War College. He took them to sea aboard *USS Langley* and gave substance to the idea that airplanes had an offensive role, even hinting that they could serve as the main naval striking force. He began developing shipboard handling procedures that ultimately enabled the Navy to put many more planes aboard carriers and use them at a far higher sortie rate than was possible in Britain. Thus, the authors argue, American carriers were able to get airborne pulses of airpower sufficient to achieve results. Reeves was the imaginative operator who complemented the bureaucrat Moffett to the benefit of the Navy.

In sum, the reasons for American superiority included imaginative senior personalities, an institution that sought information and generated ideas, a cadre that experimented with those ideas in games, and an operator who developed procedures, tactics, and organizations at sea. Essential to their success was the Bureau of Aeronautics under Moffett, which provided a home for aviators, fought internal battles over budgets, guarded against perceived onslaught by the Army Air Service, and persuaded Congress to provide funding for seven *USS Essex* class carriers along with eight battleships that were under construction when the Japanese struck.

American and British Aircraft Carrier Development, 1919–1941, is a well written synthesis based on an extensive look at the literature of the period. It develops an impressive understanding of what military innovation is all about.

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